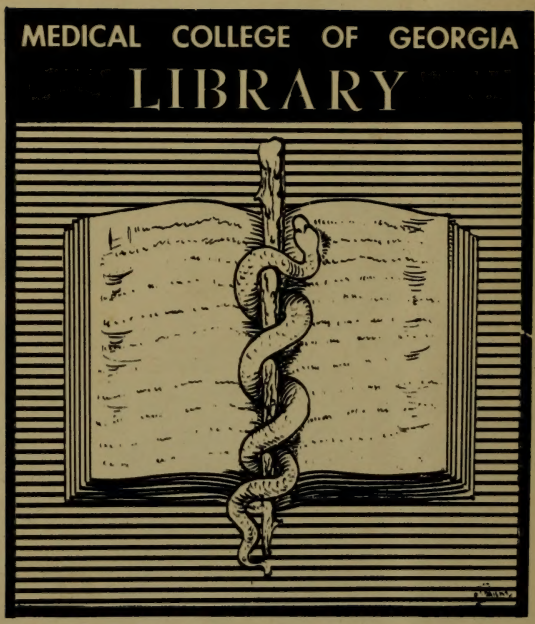
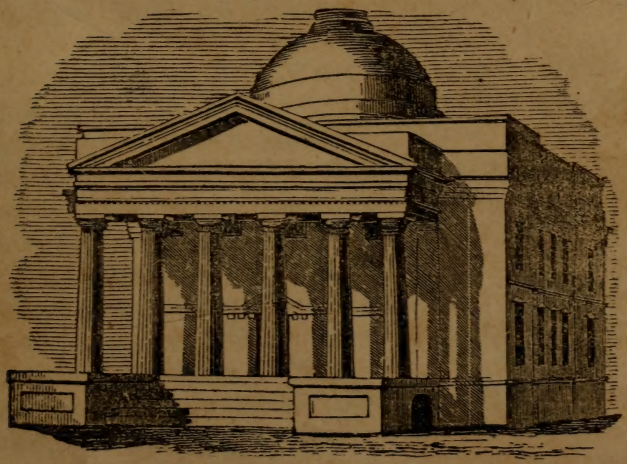

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MEDICAL AND SURGICAL JOURNAL.

EDITED BY

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AND
HENRY ROSSIGNOL, M. D.



Medical College of Georgia.

"Je prends le bien où je le trouve."

VOL. XI.—1855—NEW SERIES.

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SOUTHERN

MEDICAL AND SURGICAL JOURNAL.

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ORIGINAL AND ECLECTIC.

ARTICLE I.

Typhoid Fever. By R. B. GARDNER, M. D., of Barnesville, Ga.

Mr. EDITOR—I propose to give your readers a succinct statement of the opinions I have been led to adopt, relative to Typhoid fever as it prevails in this section of Georgia, together with a summary account of the results of my experience in its treatment with large doses of Quinine. I would not thus submit my private views to the inspection of the profession at large, were it not for the great practical value which the truth, if it be such, possesses to Southern physicians, that, there are remedies calculated to shorten the duration of fevers, which run a long and tedious course under expectant treatment.

But before the practitioner can fully appreciate the promptness and efficacy of the invaluable agent employed to curtail the existence of continued or typhoid fever, it is indispensably necessary that he possess a sound and an accurate understanding of the nature and causes of this disease, as it prevails in his own climate or arises in his own locality. Without this knowledge, as far as it may be in his power to obtain it, he cannot be considered many removes in the practice of his profession from the hideous deformities of empiricism and charlatanry. With it he may dispense the blessings of an intelligent physician throughout his community, and reflect the light of philosophy upon every action of his life.

After examining carefully the various accessible sources of information, and after a close enquiry into the subject, and

some observation of the disease, no theory seems more rational than that which locates the seat of the fever essentially in the cerebro-spinal system. The deficiency of nervous power, and the amount of morbid innervation observed in the course of this malady, show clearly that this hypothesis is not entirely destitute of foundation.

How the nervous system becomes implicated, is a question, an enquiry into which may somewhat gratify curiosity, notwithstanding the vague uncertainty of the conclusions at which the mind may arrive. An ærial poison, which in compliance with usage I will denominate Malaria, effects its entrance into the blood by imbibition through the cutaneous surface and the walls of the pulmonary air vesicles, and is transported upon the bosom of a thousand currents to every portion of the body, coming in contact with every particle of the same, and exerting its malign influence in some degree throughout the entire organism. This being the case, it is not surprising when the cerebro-spinal system—the centre and origin of all vitality, whether of sensation, voluntary or involuntary motion, and presiding over the various functions of health—is found giving evidence by its sufferings of the presence of this poison, so extremely attenuated as readily to be diffused throughout its entire mass, and penetrate to its utmost ramifications. The action of this noxious material, however, I do not pretend to have ascertained; yet I do feel fully persuaded, that in some unknown way, it perverts innervation, either reducing it below its healthy standard, exalting it above, or in some other manner rendering it morbid. The various organs of the body, then, that have any concern in the processes of health, being entirely dependent on the nervous system for that supply of energy indispensable to the performance of their physiological functions, are necessarily deranged and disqualified for the proper discharge of their duty, and disease is the inevitable result.

Such are some of the leading views I entertain of the origin of Typhoid no less than Periodic fever; and their probability, I may here remark, is favored by the success which follews its treatment with large doses of quinine.

I will now consider what I believe to be the essential cause of Typhoid fever, and to which I have already incidentally alluded, as it has occurred to me in my field of practice.

In this latitude, our warm weather is not confined exclusively to the summer months, but is often experienced early in the spring

and late in the fall, being no stranger even during the winter. That portion of the year, in which the temperature is sufficiently high for vegetation to put forth, cannot be estimated at less than nine months, during much of which time the solar heat is intense. Heavy floods of rain occur in connection with this protracted state of warm and often hot weather. Our rivers, creeks, and smaller streams; our marshes, broad flats, and extended bottoms—all are surcharged at various times, and in repeated instances, with water from the clouds. The low lands are overflowed, the hills saturated, and the plains steeped in the same element. The vegetable products of a fruitful soil live out their "brief span of existence," and perish under obedience to the laws of nature. Animal life soon, too, becomes extinct, and putrefaction ensues. Here we have combined, protracted heat, great moisture, and an immense quantity of decaying animal and vegetable matter.

Now, whatever other agencies may share in the origin or modification of our febrile diseases, it is exceedingly difficult to understand how, under the circumstances, a case of continued or typhoid fever can arise uninfluenced by the all-pervading malaria. Notwithstanding its symptoms be often precisely the same as are observed in the typhoid fever of France and New England, as well as others of our Northern states; still I must contend for the existence—and it intimately associated with the nature and concerned in the origin of this disease as it occurs in Southern latitudes—of another and an important element, fundamentally allied to, if not constituting part and parcel of miasm itself, that invisible sentinel of darkness breathing its deadly poison upon the still bosom of the serene night air. This material, too, may be evolved not only in low damp situations, but also from the surface of plains and elevated table lands; and although possessed of a specific gravity greater than that of the atmosphere, and having a tendency to collect in bodies and flow in currents after the manner of streams; still, under the full persuasion of its light ærial nature, I must believe, with the evidence before me, that it abounds in the air at varying distances from the earth's surface. The facility, too, of its transportation for short distances by means of winds is clearly shown in the books. The conclusion, then, forces itself with almost resistless power upon the mind of the philosophic physician, that typhoid fever can rarely occur in so low a latitude as ours, altogether free from malarial influence. The theory, too, which I believe to be the most probable respecting the origin of

all fevers prevailing in this region, goes far in support of this conclusion. Some of the most eminent observers of disease at the South maintain likewise, with much plausibility, and no little showing of truth, the convertible nature of all fevers originating in Southern localities, indicating how the continued form may assume the remittent or intermittent type, and vice versa. Now to what does all this amount, if it fails to establish the identity of origin of all our fevers? the intimate relation they bear to one another? and the just inferences to be drawn relative to their therapeutical management?

Whatever may be said of the lesion of Peyer's glands, which I believe to be always secondary, never primary—invariably an effect, in no case a cause of the disease; still I must contend for the agency of malaria as the great radical cause, constantly in operation, and predisposing to an attack of continued as well as periodic fever.

For the benefit of those who may question the existence of Typhoid fever in this part of Georgia, I will detail concisely a few of its leading symptoms.

The prodromic symptoms, of which many may be often absent, consist of languor and indisposition to exertion, loss or caprice of appetite, headache, sometimes hebetude, alternations of chlilliness with flashes of heat, wandering pains, muscular soreness, torpidity of the bowels, and sometimes epistaxis. These premonitory signs may continue from a day or two to a week or more, the onset seldom being abrupt. The attack may commence with or without a chill; oftener without any perceptible sensations of coldness, as far as my observation extends. The pulse now ranges in different attacts from 90 to 120, 130, and sometimes as high or even higher than 140 strokes in the minute, and is nearly continuous, varying but little until the fever begins to yield. It may possess considerable force and frequency, but is often feeble and compressible from the commencement. The surface and extremities may be either warm or hot; they are sometimes cool or cold, and somewhat bedewed with perspiration. Some gastric uneasiness is often present, not unfrequently amounting to vomiting; the stomach, however, is often composed, and when emesis occurs spontaneously or is produced by art, the matters discharged are either viscid and glairy looking, colored with the medicine used, or tinged with bile. Pain under pressure, sometimes independent of it, is often felt in some portion of the abdomen, and in the same

way gurgling may in many instances be produced in the right or left iliac fossa. Cephalalgia, felt in the frontal region, now becomes severe; and the epistaxis may be repeated. Delirium seldom makes its appearance so early in the attack; but there may be, a listless inattention from the beginning, sometimes amounting to stupor. The urine, as in other fevers, is most generally scanty and highly colored.

These symptoms, under the expectant plan of treatment, continue in varied degrees of severity or moderation until the fever runs out its usual course. In mild cases they slowly and gradually abate, but remain obstinately persistent, or grow even more formidable in severe attacks.

Usually from the sixth or seventh until towards the fourteenth or fifteenth day, or later, tympanitis occurs; and about the same time the rose-colored eruption, often absent, makes its appearance on the chest and arms, and occasionally in other localities. Still later in the disease, close observation will sometimes detect sudamina on the neck. During the second or third week, and not unfrequently later, where abstinence has been observed towards cathartics, diarrhœa in most cases sets in, and is sometimes exceedingly difficult to manage. About the same time, if not earlier, a low form of delirium supervenes, from which, however, the patient may be roused, though sometimes with difficulty.

I omit, purposely, a minute description of the symptoms, or to trace this disease to its termination, as my chief object is simply to establish the correctness of my diagnosis.

In the treatment of Typhoid fever I shall be brief, and confine myself to what I believe to be the best method of forcing the disease to abort.

About eighteen months or more since, my attention was called to the articles published by Dr. Fenner, in the New Orleans Medical and Surgical Journal, and in conversation with one or two other medical friends, relative to the "abortive treatment," as there set forth by him, it was thought probable that quinine might abridge the duration of this fever. Determined to give his method a trial, I commenced, cautiously, by giving this great febrifuge in doses varying from 5 to 8 grains several times in the course of twenty-four hours. At first I was somewhat baffled, yet felt encouraged by the results. Discovering no ill effects from the remedy, which I had been taught to use in exceedingly small quantities, I decided to administer larger doses and push the ex-

periment more boldly; and thus far I have had every reason to be satisfied with the competency of quinine to cut short the course of typhoid fever. I fully endorse the opinion of Dr. Fenner, however, that the abortive treatment will likely be of little or no avail after the first few days of the fever, when, in all probability, some local lesion will be added to the other symptoms.

My usual plan is to begin with an emetic, more especially if there be any gastric distress; and, as soon afterwards as the stomach becomes a little composed, to exhibit a large dose of sulphate of quinia, say from 10 to 20 grains, in solution; at the same time, or early after, giving a moderate portion of calomel, to be followed by castor oil or sulphate of magnesia, if there be any evidence of bilious disorder. Some mild diaphoretic in connection with the more important application of cold water, by sponging and affusion, should be used to moderate the fever when high; and an anodyne, when necessary, may be prescribed. My principal reliance, however, during the first few days of the fever, is on quinine given in the above doses, at regular intervals, two or three times a day. In this quantity it acts as a powerful sedative on the circulation, reducing quickly the force and frequency of the pulse, and sometimes inducing speedy and copious perspiration. My opinion, however far-fetched it may seem, is that it produces this effect by its stimulant and tonic influence on the brain and spinal system, thus enabling them to impart to the organs and tissues generally, the ability to eliminate rapidly the noxious material by which they are infested, and resume the processes of health.

When the disease is seen early, and before any local lesion is set up, this treatment, if fearlessly adopted and boldly practiced, rarely fails of success. And should any rising complication cause it to fail, no injury is left behind, and recourse may be readily had to expectant therapeutics.

ARTICLE II.

Report "on Chloroform in Surgical and Obstetric Practice." By J. A. EVE, M. D., Professor of Obstetrics, &c., in the Medical College of Georgia.

So much has been written on Chloroform in Surgical and Obstetric Practice, that it may be considered an exhausted subject,

and further remarks upon it may prove uninteresting and tiresome to many present; but at the requisition of the Society, and confessedly for the benefit of the junior members of the profession, I will endeavor to discharge, briefly, the task assigned me.

The question of the morality of the use of anæsthetic agents in Obstetrics, is too absurd at present; nor is this the time or place to consider the philosophy and science of the subject.

The safety of Chloroform in Obstetric practice, and the mode of its administration will be considered first, and then the cases to which it is applicable, and the indications to be fulfilled by it.

As Chloroform has almost entirely superseded all other anesthetics in Obstetric practice, and is, we believe, preferable, reference will be made to this article alone.

The safety of Chloroform in all departments of Medicine may be regarded as established, by the almost perfect impunity with which it has been of late years, so extensively and indiscriminately used, or I might, perhaps with more propriety, say abused. It may be unhesitatingly affirmed, that no remedy, of even half the power, has ever been so generally and recklessly employed, with so few fatal results.

In Obstetric practice, although it has been prescribed very freely, often, doubtless unnecessarily, and sometimes immoderately, there are very few, if any, well authenticated cases of death from its use.

In many cases of reported death from this agent, which have been investigated, it has been found that Chloroform has not been administered, or else that, dissolution might be fairly attributed to some other cause. A report was circulated last summer that death had occurred from Chloroform in the practice of my friend, Dr. Miller: on writing to inquire into the truth of this statement, the following note was received:

"ROME, GA., April 1st, 1853.

"*Dear Sir*—Yours of the 30th ult. is before me. I know of no case in which Chloroform in Obstetric practice produced death or any injurious effects immediately or remotely. I have employed it in many cases of labor, but have never found it necessary to induce the same degree of anesthesia, as in Surgical practice, and hence, (in part) perhaps its greater exemption from danger.

"I did not attend Mrs. B—— in her confinement, but have learned from the attending Physician and from her friends, that the Chloroform was given only for a short time in the early stage of labor, and was suspended several hours before the birth of her

child, during which time she was perfectly conscious and suffered in the usual manner. I saw her the first and second days after her delivery, and never was she more cheerful or her intellect more unclouded. On the third day, she was attacked with puerperal inflammation, of which she died five or six days subsequently. There was nothing in her case which could justify the suspicion that the Chloroform had any agency in her death. I had myself given it to her in some of her previous labors, and with the happiest effects, and would most certainly have done so again had I been present, nor do I know why it was suspended—but such is the history of her case. I am, very Respectfully,

"H. V. M. MILLER."

All or nearly all the popular reports of death from Chloroform in Obstetric practice, would, we believe, be found to have no more foundation in truth than the above.

During the last year or two, there have been reported in the Northern journals two or three cases, the authenticity of which we would not call in question, nor would we be understood as regarding the use of Chloroform in Midwifery entirely free from danger; it is only contended that it is comparatively safer than in Surgical or Dental practice.

We would desire most earnestly to impress on our younger brethren the importance of the greatest care and circumspection in its administration.

Instead of concealing the fact that fatal cases have occurred, we would rather point to them as beacons to warn the unwary of the danger that may result from the careless and indiscriminate use of this truly potent and valuable agent.

The comparatively greater safety of Chloroform and other anesthetics in Obstetrics, than in Surgical or Dental practice, may be accounted for by the mode of administering it, the circumstances of the patient at the time, and the nature of the pain it is intended to relieve.

It ought to be administered slowly, the patient being gradually brought under its influence. It should be given intermittently during the pain, and withheld during the interval—so that the patient may recover partially or entirely from its influence, which can be renewed or deepened whenever the pains return.

Its effect ought seldom if ever to be rendered so profound, or continued so long as in Surgery. Full anesthesia, except perhaps in some cases of operative Midwifery, is neither necessary nor proper; it is sufficient to obtund sensibility, so as to diminish very

much or annul the perception of pain, without the total abolition of consciousness. The patient inhales the Chloroform not only willingly but with great avidity—she is in the horizontal position and therefore less liable to syncope and more easily recovers from it; her stomach is generally empty, which condition obviates another source of danger that might result from vomiting when that organ is full of food. But perhaps the safety of Chloroform in this branch of medicine, depends chiefly on the character of the pain for which it is given. This pain is not altogether morbid, but is attendant on a natural process, alternately intermitting and recurring, which has a tendency to arouse the patient and prevent the anesthesia from becoming as profound and continuous as it otherwise would be. Unless the administration be carried too far, the patient will be partially or fully awakened by the occurrence of each pain. Although very much opposed to the administration of Chloroform for the extraction of teeth, at the very urgent solicitations of a lady of nervous temperament, I allowed her to inhale a small quantity to prepare her for the removal of a tooth—the effect of which was so sudden, that respiration was suspended almost immediately, and the pulse rendered nearly, if not entirely imperceptible; for some seconds—(which appeared like minutes or hours)—the application of the strongest ammonia to her nostrils, and dashing cold water in her face produced no effect. Most serious apprehensions were entertained, that this would be added to the numerous instances of death from Chloroform given for the extraction of teeth. Notwithstanding her great fright, some two years after found the same lady extremely desirous of taking Chloroform during parturition—to which request, I did not object, feeling perfect confidence in the comparative safety of its use in Midwifery. Its effects were in all respects most pleasant and satisfactory. I would not be understood as regarding Chloroform or any other anesthetic agent, entirely devoid of danger in Obstetric practice, or that it might be given recklessly and with impunity in all cases, but I believe in almost any case it may, with proper care and caution, be safely administered so as to ameliorate to a considerable degree, the pains of labor, and in many instances to cause painless parturition.

Chloroform may be administered by a piece of sponge held in a towel—or half a drachm to a drachm at a time may be poured on a towel or handkerchief held very near but not in immediate contact with the mouth and nostrils, thus preventing excoriation of

the lips and nose and admitting a free ingress of atmospheric air to the lungs along with the Chloroform. Its effects are developed much more promptly when it is inhaled through the mouth, than by the nostrils alone. The most economical mode of administration is by inhalation from a bladder, gas bag, or inhaler, but I believe, economy as well as safety, will be ensured by pouring a small quantity on a towel thickly folded, holding it alternately to the mouth and nose during the pain and withdrawing it during the interval, the cloth being firmly compressed in order to prevent waste and evaporation. In protracted cases it is advisable not to administer at every pain, but sometimes to allow several pains to pass without, and occasionally to withhold altogether for fifteen or thirty minutes, so that the effects may pass off entirely—then resume its use again. Although patients have been kept in a state of unconsciousness for many hours by Prof. Simpson and others, such practice certainly cannot be safe; the desirable point is to carry it just far enough to annul the perception of pain without rendering the patient unconscious; it is sometimes extremely difficult, if not impossible, to hit this happy point. Its effects on all persons are not the same; on some, large quantities have very little influence, while others are affected suddenly and profoundly by a very minute portion. We might judge from their expressions that some individuals retain the perception of pain after the loss of consciousness; but on awakening, they remember nothing that has passed, not even the expulsion of the child. It should always be exhibited cautiously, and never when the patient is excited; her mind should be calm and composed before inhalation is begun, otherwise its effects might prove very unpleasant, if not dangerous.

Though a firm believer in the safety of Chloroform in the practice of Obstetrics, when given with proper care, I would not advise its indiscriminate use in all cases. In perfectly natural, and what are termed by comparison easy labors, it is certainly not necessary and might be dispensed with. In such cases I withhold it, unless the patient earnestly solicits it, apprehending that its general use might lead to its abuse, for it is absurd to suppose that so powerful a remedy may not produce dangerous results in the hands of careless practitioners. But in the more difficult and painful cases it is of inestimable value. Its introduction into Obstetric practice is surely one of the greatest blessings ever conferred on suffering humanity.

As it is not always convenient to have another physician pres-

ent, the accoucheur may himself administer the Chloroform when not particularly engaged in obstetric services to the patient, and even when thus employed, he may direct and superintend its administration by the nurse or any intelligent person present.

The accoucheur should observe the patient attentively while under its influence, especially in reference to the state of her pulse and respiration. Whenever the former becomes much depressed, or the latter stertorous, the Chloroform should be suspended until they become more natural. When the effects of the anesthetic seem to be more profound than may be considered desirable or safe, it is advisable to dash cold water on the patient's face and heart, and apply strong aqua ammonia to the nostrils. When respiration is suspended, insufflation is advised either by the mouth of another person or by means of a bellows. Galvanism might succeed well if it could be brought to bear on the case in time.

It is seldom proper to administer Chloroform early in the first stage of labor. It is best, generally, to defer its exhibition until this stage is considerably advanced, or the second commenced, lest if the labor be protracted, you may be compelled to keep the patient too long in the anesthetic state, for when once its use is begun, it is very difficult to induce her to suspend it while the labor is progressing. But to this general rule there are some exceptions. At times, the nervous system is so affected that the sensation of pain is morbidly acute; the patient suffers excruciating agony from very moderate uterine contraction. This state we sometimes find in patients who have usually borne the pains of parturition with exemplary fortitude and patience. This condition of the nervous system is generally most happily corrected by Chloroform, and the same patient is often willing to dispense with its use in the second stage, bearing the more violent actions of the uterus, with comparatively little or no complaint. Chloroform is said to exercise a decidedly relaxing influence in cases of rigidity of the os uteri. While I am willing to believe it may have this effect, I am not prepared to testify to the fact from my own experience, for in my practice this cause of impeded labor seldom occurs—which I think will accord with the observation of all Southern practitioners. When, from irregular or spasmodic action of the womb, the patient suffers inordinately, while there is little or no progress in the labor, Chloroform meets most admirably the indications in practice, to relieve the patients sufferings and correct that state of the nervous system upon which the mor-

bid action depends. Whenever, in the first or second stage, rupture of the uterus is threatened by its violent action, it would be advisable to put the patient more profoundly under the influence of Chloroform, than in ordinary circumstances, for the purpose of diminishing uterine action, until measures can be taken to avert the danger; rupture, however, is rarely threatened in this stage, except in cases of rigidity, in which it would also act beneficially by virtue of its relaxing influence. In the whole course of obstetric practice, there is perhaps no instance in which Chloroform evinces more valuable results than in the prevention and subduction of convulsions, whether occurring before labor, during the first or second stage, or after the process is over. It is especially for the fulfilment of this indication that we consider Chloroform indispensably important, and chiefly on this account that we would not be willing to attend any case without having it in reach; the use of Chloroform in puerperal convulsions is referred to now, because we believe they occur most frequently in anticipation of labor or during the first stage. When convulsions are imminently threatened, this may often be warded off by the sudden induction of a moderate degree of anesthesia before venesection could be performed—we would not however, propose Chloroform as a substitute for blood letting in this dangerous affection. When time is allowed, and especially when there is severe headache, we would advise venesection first, and then the gentle administration of Chloroform to compose the nervous system, conjointly with morphine or some other opiate, say, $\frac{1}{4}$ gr. Morph. or 1 gr. Opii., every three or four hours. Although we do not think that Chloroform can obviate the necessity for depletion, we do most firmly believe, judiciously used, it may prevent the excessive expenditure of blood, (to which such patients were formerly subjected)—to their very great benefit, thereby rendering their convalescence much more rapid. By the use of Chloroform, convulsions may not only be averted when remotely threatened by the usual premonitory symptoms, but may sometimes be arrested when their immediate supervention is evinced by spasmodic twitchings of the facial and orbital muscles; when actually commenced, their duration may be curtailed and the succeeding coma rendered less profound.

Were it not transcending our prescribed limits, and digressing from the subject proposed, cases might be adduced illustrative of the views advanced. It is true there are some instances in which all resources fail, in which every effort is unavailing, and we be-

come impotent spectators of destruction we cannot prevent; but we consider Chloroform, a most important and valuable addition to our means for the treatment of this truly terrific disease, in which it will greatly reduce the number of fatal cases.

It is for the relief of the more violent and exhausting pains of the second stage, that Chloroform is more particularly appropriate and requisite. The benefit derived is not simply from its diminishing the patients suffering, but inasmuch as pain itself exhausts the energies of the nervous system; in the same proportion as this remedy lessens pain, it also saves strength. Chloroform, unless when carried very far, does not diminish the force of the contractions of the uterus or abdominal muscles—it is altogether by obtunding sensibility, that it thus saves strength and prevents or lessens the nervous shock attendant on labor; hence it is, that those who take Chloroform, generally have a much more rapid and favorable convalescence, than those who are allowed to pass without relief or mitigation through a violent and protracted labor. It is true, some very eminent obstetricians have objected to the use of this great remedy, but we think that a careful analysis of their objections, will satisfy us of the fallacy of their reasoning. Professor Meigs, objects to Chloroform in Midwifery—1st. Because he regards the pain in parturition as physiological, and thinks it ought not to be suppressed; and 2d. Because in the employment of instruments, he considers it necessary to know how much the patient suffers, to avoid doing harm.

But even admitting (for the sake of argument) the pain to be physiological—why not relieve the patient, if we can do so, without interference with the process or injury to the patient? In what are styled easy labors, or whenever the suffering is not intense, anesthetia is certainly unnecessary; but pain, when inordinate, is itself a great source of danger, as it may destroy life, directly or indirectly, by inducing convulsions or causing exhaustion; it should therefore be at least abated, whether physiological or pathological.

Professor Meigs' second objection does not appear to me, much more valid than the first. The degree of pain actually felt, is not always in proportion to the injury sustained, and the expression is a still more fallible criterion. Some complain excessively when suffering comparatively very little, while others make very little complaint, however intense their sufferings may be. Nothing can compensate the accoucheur for a want of a most minute and accu-

rate knowledge of the material structures and the positions and relations to them of the fœtal head. He should always operate by art and not by force, graduating the power employed by his knowledge of what may be applied and safely borne, and not by the resistance to be overcome: he should always know that he is using no destructive violence—inflicting no injury, whether the patient be sensible of it or not. It would certainly be a very uncertain and unsafe reliance, to depend on the patient to inform us whether we are applying and using instruments properly. One great source of embarrassment and danger in operative midwifery, is the difficulty often encountered of controlling the voluntary movements of the patient, which is entirely obviated by the anesthetic influence of the Chloroform.

☞ IT IS IN INSTRUMENTAL DELIVERIES, during the performance of version and other obstetric operations, that I consider its administration peculiarly appropriate and advantageous. In conclusion, we do affirm that the discovery of the anesthetic properties of Chloroform, and its employment in obstetric practice, constitute a new and glorious era in the history of our science. Who can contemplate the happy and wonderful effects of this heaven-blest agent, without the most lively thrill of joy, and the most profound and heartfelt gratitude to Him, who is the author and giver of every good. Is it not delightful to behold woman's primal curse in part annulled, her heavy burden lightened, and her condition ameliorated? What can be more gratifying to every humane heart, than to witness the most intense agonies—almost instantly, as by magic, relieved, and to behold the female who, a moment before, was suffering the most excruciating tortures, now sleeping calmly, or awake and conscious, expressing her joy and gratitude, while labor is progressing and DELIVERY ACCOMPLISHED WITHOUT PAIN.

CASE I. Called to see a negro woman at Mr. Blackwood's in Hamburg, S. C., October 30, 1849. She had already passed through seven convulsions and was now lying in a state of unconsciousness, with incessant jactitation. On examination the os tincæ was found to be dilated, and the child's head propelled through the superior strait of the pelvis. In consultation with Doctor Taylor, of N. C., it was determined to deliver at once with the forceps, used during anesthesia. It only required half a drachm to a drachm of Chloroform to put this patient in the condition desired; the effect was immediate and profound; all jactitation ceased instantly. The instruments were readily applied, and while the

mother was lying perfectly motionless, a large and living child was extracted. Convulsions did not return, and the convalescence was very favorable. The subsequent death of the child from Trismus Nascentium, we do not think, in the least attributable to the mode of delivery. Some writers advance the opinion, that the children of women who have had convulsions are most liable to nervous affections; my experience does not confirm this; the only case of Trismus I have known, subsequent either to convulsions or instrumental delivery, is the one just mentioned. In regard to the cause, as well as to the treatment of this form of Trismus, our knowledge is very imperfect. We would only in addition remark, concerning the case of puerperal convulsions detailed above. The patient had not intelligence enough to control her movements voluntarily, and so great was the muscular action, that even a resort to force would hardly have sufficed to keep her still and motionless, enough to apply the forceps accurately. Dr. Taylor and myself were fully convinced that the favorable termination of the delivery, as well as the facility and expedition with which it was effected, depended very much on the administration of Chloroform. It is also probable that the Chloroform prevented the recurrence of convulsions.

CASE II. Mrs. Q. of Graniteville, S. C., primipara, about 30 years of age, was taken with labor, March 28th, 1850, attended by Dr. James H. Murray. Labor continued during the 28th, 29th and 30th; about midnight of the 30th she had a strong convulsion, for which she was bled copiously; three hours after, another convulsion occurred, and venesection was again resorted to, followed by the administration of an opiate, after which she had no more convulsions. I saw her early Sunday morning: labor was still active, but her pulse was extremely feeble and frequent, beating 140 strokes per minute. In consultation with Dr. Murray, it was determined to place her under the influence of Chloroform, and deliver by the perforator and crotchet, inasmuch as extraction with the forceps was deemed impracticable, and the child's death ascertained as satisfactorily as possible, by auscultation. As soon as anesthesia was completely induced, her pulse became much less frequent, but increased in fulness and force. Such great advantage was afforded by the motionless condition consequent upon the inhalation, that the perforator was pushed through the foramen magnum, firmly fixed upon the base of the cranium, and a large fœtus extracted, in a very short time, without the least injury to the mother.

In this case, the convulsions had ceased some time before the Chloroform was used, owing, no doubt, to the copious abstraction of blood, and the administration of the opiate—a strong proof of the great and indispensable importance of these remedies in the treatment of convulsions—averting them, when threatened before actual labor has commenced, and in some cases even

arresting them while parturition is progressing and before its termination.

The value of Chloroform in this case was evinced, in facilitating and rendering the delivery safer, preventing the further infliction of pain and exhaustion of strength in a patient already much prostrated, by the long continuance of labor and the necessary abstraction of blood.

CASE III. *Convulsions occurring after Delivery.* Reported by Dr. S. B. SIMMONS.—Mrs. S., the subject of the following report, was delivered of adherent fœtuses by Dr. Joseph A. Eve, 19th October, 1851. (See Dr. Eve's Report in Southern Medical and Surgical Journal for 1852, February number.)

The patient continued to do well, until about four hours after delivery, when she was seized with a convulsion. Drs. Eve and Ford met in consultation, bled her copiously, and administered Chloroform. They remained with her for more than an hour, during which time she had two other convulsions. Drs. E. and F. being obliged to leave, sent for, and requested me to remain.

I now watched the patient attentively, intending to administer Chloroform as soon as the slighest convulsive movement occurred; but as the convulsions came on, almost without premonition, I was unable to get her under the influence of Chloroform in time to prevent them; still its use had the effect of lessening their duration and violence. She had had three convulsions since my arrival, making six in all, when I remarked that each interval, or from the commencement of one to the commencement of the next, was exactly forty-five minutes. I therefore determined to anticipate the next, by commencing with the Chloroform five minutes before the expiration of this interval. I did so, and succeeded in preventing the convulsion.

After having administered Chloroform in this way, three times with like success, the patient fell into a gentle sleep; two hours later, she being still asleep, and having had no symptoms indicating a return of convulsions, I left, after having given directions for the farther use of Chloroform, were it to become necessary.

Mrs. S. speedily recovered, and has since passed most happily through two accouchments.

CASE IV. Reported by Dr. S. B. SIMMONS of Augusta, who was present and assisted in the delivery.—On the 23d of September, 1852, Dr. Joseph A. Eve was called by Dr. Maddox, to a negro woman belonging to Mrs. L. of Columbia county. The patient was in labor with her fourth child. On Dr. Eve's arrival, fifty-four hours after the commencement of active labor, the shoulder was found presenting, the cord prolapsed and pulseless, and the uterine pains very feeble and far apart. Taking advantage of this state of things, Dr. Eve attempted version, but his manipulations, having re-excited the uterine contractions, Chloro-

form was administered. Finding that the head could be brought down much more readily than the feet, this was done, and the case left a short time to see if delivery might not be effected without instrumental aid.

As the labor made no progress, and in consideration of the facts that the child was dead, (as evidenced by the prolapsed and pulseless cord,) that the patient's strength had already been greatly taxed, that her pelvis was contracted, and her previous labors had been very slow and tedious, it was the opinion of all present, that the perforator and crotchet should be employed.

Extraction was exceedingly difficult, more than an hour being consumed in this alone.

Two hours after delivery, the patient was doing well, and when last heard from was in high health.

In this case Chloroform was given, with but few intermissions for more than three hours—never to such an extent as to cause stertorous breathing; still, sufficiently to produce complete insensibility to pain. Notwithstanding this long continued use, the patient suffered no unpleasant effects, and her recovery was more speedy than it probably would have been, had Chloroform not been employed.

CASE V. April 6th, 1853.—Mrs. J., primipara, aged about twenty, was seized with convulsions, early in the first stage of labor. I saw her, in consultation with Dr. Dearing of this city. She was immediately bled copiously, and on the accession of each convulsion, was put under the influence of Chloroform, which appeared not only to shorten the convulsion, but to render the consequent coma shorter and less profound and the interval longer. Gentle manual dilation was employed to hasten the termination of the first stage. Convulsions had now ceased to occur, labor was progressing fairly and the patient's condition in all respects so good, that a resort to the forceps was considered unnecessary and therefore improper. In a shorter time than might have been expected, a healthy, living child was born. In this case, the convulsions were arrested by blood-letting and Chloroform some time before the termination of labor.

Mrs. J. had several convulsions before Dr. Dearing saw her: these and the consecutive ones, making in all, about twelve.

CASE VI. *Convulsions after Delivery.*—April 20th, 1854.—I was called to Mrs. C., primipara, about twenty years of age. On examination, she was found to be far advanced in labor, and suffering intensely from headache. Nearly a quart of blood was promtly abstracted, with immediate relief to her head; in about three hours labor terminated happily in all respects, but two hours after the delivery, a strong convulsion came on. The vein was re-opened and blood allowed to flow to the extent of about sixteen ounces more. Directions were left to administer Chloroform upon

the slightest indication of a convulsion. In my absence an hour or two after the first convulsion, another appeared to be coming on, but was averted by the timely application of Chloroform. Very soon after my return, I observed evident premonitory symptoms, which were again arrested by the Chloroform. After the lapse of some time, she did have a convulsion, but its duration was materially lessened by the anesthetic, and in all probability it would have been entirely prevented as the others were, had there not been some delay in the administration of the Chloroform; this was the last. Erom one quarter to a third of a grain Morphine was prescribed, to be taken every three or four hours for several days, until the patient became convalescent. The effect of the Chloroform was certainly most happily evinced in this case, although much ought doubtless to be attributed to the bleeding and Morphine.

It is probable too, that if this patient had been bled previous to the coming on of labor, or soon after its commencement, convulsions would have been entirely averted.

CASE VII. Mrs. B., primipara, aged nineteen, was seized with convulsions, in the eight month of gestation, at 3 o'clock, P. M., 1st of March, 1854. Chloroform was freely administered, and blood abstracted to the amount of thirty ounces; Morphine was also given, but convulsions continued to recur. Doctors Jones, H. A. and A. Bignon, Dugas and Ford, were in attendance. All our remedies apparently failing to have the slightest influence in arresting the convulsions, and slight dilatation of the os uteri having commenced, the membranes were ruptured by the introduction of a steel pen. After the discharge of the liquor amnii, there was a suspension of the convulsions for three hours; labor supervened and the convulsions returned with most frightful rapidity and violence; Chloroform was given after each convulsion, Morphine exhibited by the mouth, as long as deglutition lasted, and then by enema, and the dilatation of the os was assisted by the fingers; as soon as this was sufficiently accomplished, but before the whole circle was fully dilated, the patient was brought more profoundly under the influence of Chloroform, a very narrow and delicate pair of forceps were introduced and a living child extracted about 2 o'clock A. M,. March 2d. The convulsions nevertheless continued at intervals of fifteen to twenty minutes, until late in the afternoón of this day, notwithstanding the administration of Chloroform, sinapisms to the spine, cold affusions to the head, blister to back of neck, calomel and all other means usually considered most potent, during which time, it is estimated that she had eighty convulsions, and that two pounds of Chloroform were consumed. Mrs. B. was ill for some time, subsequently; had an attack of peritonitis, for which she was blisterd: but after a tedious convalescence, recovered very good health. The child though premature and feeble, survived. This case is remarkable for the recovery of the mother, and the safe birth of the child after so many con-

vulsions, and for the continuance of the convulsions after delivery, as frequent and numerous as before. I have never known, nor do I remember ever to have read of a similar case. A patient in my practice, many years ago, survived after having forty-one convulsions.* She was delivered, by the forceps, of a dead child. A case also occurs to me, in which, after the patient was to appearance, almost in articulo mortis, the number of convulsions she had had not being known, a living fœtus was extracted by the forceps. The mother rallied after the operation, lived several days, but afterwards died of peritonitis.†

In the case of Mrs. B., the good effect of Chloroform, as well as of all other remedies, was not obvious in arresting the convulsions, for they continued for a long time, apparently uninfluenced by any means whatsoever, and when they ceased, we did not know to what mainly to attribute the result. We do not doubt, however, that it was due in some measure to the powerful agency of Chloroform, but this anesthetic independent of its direct influence on the convulsions, was of great value in keeping the patient motionless and insensible during the application of the forceps, and the extraction of the fœtus.

As this case was so desperate, and the result beyond all reasonable expectation, we think it a fair conclusion, that no one of the powerful remedies could have been safely omitted.

CASE VIII. Mrs. C. of Edgefield District, S. C., multipara, aged thirty-two, was seized with convulsions about the commencement of labor, Aug. 23d, 1850. She was immediately bled and a quarter of a grain of Morphine given—Chloroform was administered on the accession of each convulsion, but they nevertheless continued to recur through the night, becoming however, less severe and less frequent. Dr. Creighton of Hamburg, and Dr. Ford of Augusta, were in attendance with me. As the convulsions had become comparatively slight, and further apart when the second stage commenced, and especially as this stage was progressing very fairly, it was deemed inexpedient to hasten it by the use of instruments. Mrs. C. was soon delivered safely of a living child; she had eleven convulsions before its birth and one afterwards. Morphine was then exhibited more freely.

The happy result in this case, is certainly in some degree at least, attributable to Chloroform. This case is another illustration of the propriety of trusting to the natural efforts, without resorting to the forceps whenever labor is advancing fairly. In the excitement, hurry and confusion occasioned by the occurrence of convulsions during labor, it is to be feared, that sometimes instruments are used unnecessarily, and not unfrequently to the injury of mother or child, perhaps both, when nature herself, if left alone, would have accomplished the delivery with greater safety, and probably, in as short a time.—[*Transactions Med. Soc. State of Ga.*

* See S. M. & S. Jour. for 1847, p. 520. † See S. M. & S. Jour. for 1848, p. 69.

TRANSLATIONS AND CONDENSATIONS FROM FRENCH JOURNALS.

A simple, prompt and radical treatment of Mentagra, (*Varus Mentagra*). By Dr. RICHART, of Soissons.

Whether this affection be acute or chronic, two indications always present themselves: to subdue the irritation, afterwards to use resolvents.

For several years, I have fulfilled the first indication successfully by having the diseased surface washed five or six times daily with a warm decoction of chervil and laurel leaves, (prunus laurocarasus). In order to cause the scabs to fall, I advise my patients to anoint them every night, on going to bed, with fresh cream, or with a cerate made of yellow wax and olive oil melted together. Three or four days' use of the decoction, will ordinarily suffice to subdue the irritation.

I fulfill the second indication with equal success, by causing the surface to be washed five or six times a day with the following solution, using a fine sponge, and allowing the part to dry without wiping.

℞. Sulphate zinc, - - parts 16.
Sulphate copper, - - " 5.
Distilled water, - - " 500.

Dissolve, filter and add:

Distilled laurel water, grs. I5.

As to internal remedies, believing that mentagra is caused principally by a chronic suppression of the cutaneous perspiration, I prescribe two large tumblers of water to be taken every morning before breakfast, at an interval of an hour. I advise also dry frictions over the whole body every night, and a walk every morning before breakfast, because I am convinced that the stomach being empty, perspiration is freely produced by the slightest exercise. This abundant secretion, I think, is the best purifier of the blood. During winter, as this secretion is sensibly diminished and that of urine increased, I use this latter means for purifying the blood by administering diuretics—if they are insufficient, I have recourse to purgatives.

These simple means are seconded by alkaline baths and a moderate diet, more vegetable than animal. I exclude salted or spiced food, and also alcoholic drinks. In this way I obtain prompt cures, even in cases that had been treated for eight or ten years without success.

I recommend my patients, in order to avoid relapse, not to pluck out the beard, as was formerly proposed, but on the contrary, to let it grow at least three or four months after being cured, or, to cut it, not with the razor, but with scissors curved on the side.

[*Revue de Thérap. Médico-Chirurg.*

Rational treatment of Cerebral Congestion, and of Apoplexy with the Alkalies, and particularly with Bicarbonate of Soda.

Dr. Carrière has just published in the *Annales Médico-Physiologiques*, an interesting work to demonstrate that congestion and apoplexy may be prevented for a long time by the liquifying properties of alkalies upon the blood. The following will sufficiently illustrate his ideas and the *modus faciendi*.

Too strong a diet and a life of inactivity, produce an excess of nutrition, and consequently too great a richness of the blood. The system receives a great deal and expends too little. The sensation of heaviness and of general fullness which result from it, usually indicate a change in the condition of the humors. If acid prevails, it is easily known by the manner in which digestion is performed, by the pains of the stomach, and by the odor of the eructations. To avoid the congestions which would soon be produced, if they have not sometimes already taken place, it is necessary to administer alkalies. Bleeding will modify or retard the accidents; it does not modify the cause which, remaining always active, will end by showing itself more or less violently.

The alkaline treatment offers no difficulty. The condition once known, we must act accordingly; with small doses when the affection is circumscribed, and with larger ones when more extensive and serious. The most simple manner of administering the medicine is the best, and the alkali to be preferred to all others is the bicarbonate of soda. He recommends the mineral alkaline waters, and believes ammonia useful during the treatment as well as at the most urgent moment. Having given these general rules, he passes to the details.

When the affection is confined to the stomach, a few grammes of bicarbonate of soda will suffice—from a half to one gramme, at most, in a tumbler of water sweetened with simple syrup. After twelve or fifteen days, sometimes less, of this treatment, it is rare if the pains and sluggishness of the digestive faculties have not pased away. It is often surprising, that a condition which has

resisted the series of anti-spasmodics yields as rapidly under the influence of a treatment which seems to possess so little activity.

When the economy presents general symptoms of congestion, and the danger seems yet far off, the time is favorable for commencing the treatment. It is scarcely necessary to say that it requires time to produce a great change of the blood and other humors, so that when violent attacks are not to be feared immediately, a great amelioration may be relied upon, and perhaps, a complete cure may be effected by means of bicarbonate of soda. The treatment should be commenced with one gramme in a little syrup and water, and gradually increased to two, and even more, without increasing the dose too much. By leaving off the medicine after using it regularly for two or three weeks or a month, its effects can be better judged of and its action kept up by using moderate doses.

At a more advanced period, that is, on the eve, or at the moment of a simple or apoplectic congestion, it is to ammonia that recourse should be had according to M. M. Page and Gavarret. Twenty-five drops in a half tumbler of water during the attack is enough, but as this is given at intervals, it should be done according to the case. After the attack, instead of giving five drops every hour in a half tumbler of water, it would be better to give two drops in the same quantity of fluid every half hour. This treatment may be disapproved, but it cannot be denied that it is rational. If it does not exclude bleeding, a remedy directed against a secondary effect of the disease, it controls it, because it directs itself to the cause, and not to the consecutive phenomena.—[*Ibid.*

Tincture of Benzoin in Chapped Nipples.

M. A. Bourdel, Professor of the Faculty of Medicine of Montpellier, and Inspecting Physician of the Malon, affirms that he has found the tincture of benzoin to be the best remedy in this disease. He has used it for ten years without ever having had cause to change. This tincture is applicable to all fissures of the breast, whether superficial or deep, large or small, of long standing or recent, and it causes them to heal rapidly, provided they are simple, that is to say, if they are not under a syphilitic or other diathesis.

He applies the tincture by means of a soft brush or otherwise, to the fissures until they are coated with the liquid. He generally makes the first application himself, because it is the most painful, and to demonstrate the way in which it should be done; and he

recommends it to be applied every time the child nurses, and oftener if necessary.

A few days of this simple treatment suffices to heal the smaller fissures and render the breast fit to discharge its functions. If the fissures are more extensive, the treatment must be continued longer. He never saw a case which required this treatment more than twelve days.

The first application of the tincture causes a certain pain or smarting in a majority of cases, which is pretty acute when the fissures are deep, but it never lasts more than fifteen minutes. After the first application it is not only no longer painful, but gives relief, and forms a covering for the surface which it protects. The child can at any time take the breast without inconvenience or repugnance, having seen them nurse even before the tincture was dry. After a short time, the child may nurse without washing or wiping the breast; and who knows the sufferings which are thus spared the mother!—[*Gazette Méd. de Toulouse, May* 1854, and *Ibid.*

Cafeine in Sick Headache.

We read, in the *Allgemeine Medizinische Centralzeitung*, that Dr. Eulenburg has obtained excellent results from cafeine in the treatment of this disease in two cases, one 30 and the other 40 years of age. The disease returned at intervals of from one to four weeks. Many remedies had been resorted to, but without relief. M. Eulenburg began at the first symptom of a return of the attack with 10 centigrammes of cafeine, and repeated this dose every two hours until three doses had been taken. This treatment quieted the pain and lengthened the intervals.

As the price of cafeine is very high, the author suggests in its place the extract of coffee, 20 centigrammes of which are equivalent to 5 centigrammes of cafeine.—[*Ibid.*

Treatment of Hydrocele. By M. Bellucci.

The operation for the radical cure of hydrocele is now one of the simplest and most certain in surgery. It is an operation nevertheless, and as such is not entirely free from accidents; every means should therefore be employed to arrive at the same end without it. M. Bellucci uses an ointment composed of from 4 to 6 grammes of powdered digitalis and 30 grammes of lard. Frictions

are made with this ointment upon the tumor, being careful to wash the scrotum every five or six days, to cause the absorption of the remedy to be more active. Five cases, one acute and four chronic, reported by the author, are sufficient to show the efficacy of this treatment, which requires from two to three months to produce a complete cure.—[*Il. Filiatré Sebezio et Gaz. Méd. de Paris*, and *Ibid.*

Treatment of Gangrene of the Lungs.

Prof. Skoda, of Vienna, has recently published four cases of gangrene of the lungs successfully treated by inhalations of the vapor of oil of turpentine and internal use of sulphate of quinine. Under this treatment the cure was rapid, without leaving infiltration, caverns, or any abnormal sounds; the vesicular respiration having re-established itself. The vapor was inhaled every two hours, for five or ten minutes, and the quinine given in one grain doses every two hours. In order to render the turpentine vapor less disagreeable, oil of roses may be added, as did M. Skoda in one of his cases. (*Zeitchr. d. K. K. Gesellsch. d. Aerzte.*)—[*Ibid.*

New method of administering Cod-liver Oil. By M. Sauvan.

Cod-liver oil being so valuable a remedy, particularly with children, that all means of rendering it less disagreeable is of great value. The following formula will entirely mask the taste and odour of the oil:

℞. Yolk of egg, ... 1
Sugar, ... 60 gram.
Orange flower water, . . 30 "
Cod-liver oil, ... 90 "
Essence of bitter almonds, . 1 drop.

[*Ann. Chir. de Montpellier*, and *Ibid.*

Simple method of administering Iodine Inhalations.

The inhalation of iodated vapor is well known to be inconvenient in consequence of its irritating effect upon the air passages and the cough it induces. In order to obviate this difficulty, M. Bariere has proposed, in the *Gazette Médicale de Toulouse*, the following plan:

He causes his patient to snuff up pulverized camphor saturated with iodine vapor. This is done by rubbing together 100 parts of

pulv. camphor and 1 part of pure iodine, which are wrapped in a bit of gauze and put into a snuff-box. By shaking the box occasionally and imparting to it the warmth of the hand, the vaporization of the iodine will be produced in a few hours and be recognized by its peculiar color. This iodated camphor occasions sneezing, and even some pungency in the nostrils, but as the vapor reaches the air passages an agreeable sensation is experienced which induces the patient to take deeper inspirations. Those who have tried it become very fond of it, and many even prefer it to snuff. The anaphrodisiac properties of camphor may render it an useful adjuvant, inasmuch as venereal indulgences are among the active causes of phthisis.

Chorea.

M. Blache read an essay before the French Academy of Medicine upon the treatment of Chorea by gymnastic exercises. The author thinks that there are two indications in the treatment of this disease: 1st, to restore to the will its control of the muscles; 2d, to change the constitution of the patient. The first of these indications is the object of the gymnastic exercises.

Of 108 cases of chorea subjected to gymnastic treatnent at the Hopital des Enfans, only six were unsuccessful, although there were chronic cases which yielded only in 120 days and 73 exercises. It should be acknowledged, however, that sulphurous baths have been nearly as successful as gymnastics, for it appears that of 135 cases treated with these baths only 18 were not cured. It would seem also that the bath treatment is more expeditious than any other. Yet there are reasons for preferring gymnastics. These exercises are applicable to all cases not complicated with cardiac affections; whereas the quantity of sulphuret of potass. necessary is so great as sometimes to cause an eruption upon the skin which forbids the bath any longer; nor can they be used if the skin is abraided at any point. During the first days of their use they not unfrequently increase instead of lessening the spasmodic affection, whereas by passive exercise the muscles at once become calm. The state of the general system after each of these plans of treatment, should be considered in estimating their relative value. The appetite is improved, the circulation invigorated, and the nutritive process made more perfect by the sulphurous baths. The muscular power is increased, the skin and mucous membranes become florid, and the arterial sounds vanish. But

these effects, to which we should attribute in a great measure the cure, are especially worthy of note under the influence of the gymnastic treatment. Would it not therefore be advantageous to combine these two modes of treatment? This question has been settled affirmatively in a large number of cases.

It is not rare, adds Mr. Blache, to see chorea occurring during a too rapid growth. Under such circumstances, the patient frequently complains of pains in his wrists and elbows, which are regarded by Dr. See as rheumatic. This kind of arthralgia is regarded by Mr. Blache as dependent merely upon excessive growth and they disappear very readily by gymnastic exercises. The gymnastic exercises, which might at first appear hazardous, especially for children, are in reality without danger. They should, however, be of two kinds; first, passive exercises, which alone can be used when the will has no control over the muscles; second, active exercises, which may be executed voluntarily with or without the aid of machines.

Menorrhagia. By EDWARD RIGBY, M. D., etc., Senior Physician to the General Lying-in Hospital; Examiner in Midwifery at the University of London.

In selecting cases of menorrhagia coming on at that period of a woman's life when the menses are either about to cease, or ought to have done so, and attended with local symptoms and conditions of the uterus which I have considered to be of a suspicious, if not dangerous character, let it be understood, that I by no means point them out as cases of actual malignant disease, but merely as exhibiting more or less of a disposition thereto, although still, in many instances, admitting of considerable relief by treatment.

If we examine into the history of malignant uterine disease, we shall, in most instances, find that there has been an early passive stage of considerable duration; that the health has become gradually impaired, the uterine functions deranged; in women who have been pregnant several times, their two or three last pregnancies have probably terminated in abortion, which has come on without any very assignable cause. I am aware that this applies equally well to non-malignant disease, like fibrous tumor; but it is not the less worthy of note, as it often furnishes us with the earliest data respecting the commencement of the disease, and enables us, in reviewing the history of the case, to trace it back to an earlier period than would otherwise have been suspected. That abortion is not an invariable forerunner of malignant or non-malignant disease, is proved by the well-known fact of pregnancy being associated with every form of it, and running its course undisturbed

to a late, or even the full period, even under circumstances where it could scarcely have been supposed possible. This, however, must be rather looked upon as an exception to the rule, that pregnancy occurring during the two or three years which precede the outbreak of uterine disease mostly terminates in abortion. I hold, therefore, that abortion coming on without any very evident cause in a woman past 40, is a suspicious symptom, and the more worthy of attention, as the early symptoms of uterine disease are generally too inappreciable to attract even the notice of the patient, and are of a nature about which she would not willingly consult a Medical man if she could possibly avoid it.

In most instances, abortion is rather a retrospective symptom, to afford some probable clue as to how long the disease has existed, when the fears of the patient and suspicions of the Medical man have been excited by attacks of menorrhagia. It is to these attacks (of menorrhagia) in their earliest stages and slightest degrees, and more particularly to that group of symptoms which I mentioned in my last report as chiefly connected with chylo-poietic derangement, and to the anæmic, chlorotic appearance of the patient, that I am peculiarly anxious to draw the attention of the Profession, because this is the period when treatment will be of most avail, and produce the most striking effects.

Mrs. H., aged 50; married 21 years; four children; aborted in her last three pregnancies; short and stout; pale and flabby.

Dec. 10, 1849.—Profuse bloody discharge, coming on irregularly, sometimes bright, at others dark. The periods have varied a good deal of late, sometimes appearing every fortnight, at others only once in five weeks. They last more than a week, and are profuse for the first four or five days; sometimes preceded for some hours by rather sharp pain about the hips, which she is in the habit of relieving by a sedative pill. These attacks are attended with much nervous depression. Has pain sometimes of one and sometimes of the other groin. Tongue clean, but sulcated. Bowels regular.

The catamenia have been gradually becoming profuse during the last ten years, and first showed this disposition two years after her last abortion. During the last year she has had a slight watery discharge, which stiffens her linen.

Examination per vaginam.—Os uteri high up, small and soft; cervix short; uterus much enlarged. The uterine sound would not pass at first beyond one inch, but the dilater passed easily through the os internum, and then the sound passed 3½ inches. A quantity of thick, clotty, dark brown fluid came away. The fundus is inclined to the right side.

℞. Pil. hydrarg. gr. iij., ferri sulph. gr. ij., extr. hyoscyami gr. v. M. ft. pil. ij. o. n. s. Mist. potassæ bicarb: et nitratis ter die.

12th.—Catemania coming on. Omitt. mist.

℞. Acidi gallici, extr. hyoscyami aa. gr. v. M. ft. pil. ij., bis die sumend.

15th.—Catamenia came on freely, but not profusely, and without clots. The discharge was brown and rather thick. Has not felt weakened by it. Bowels confined.

℞. Pil. hydrarg. extr. coloc. co., extra. hyosc. aa. ℈j. M. ft. pil. xij., sumat ij. h. s.

20th.—Was seized during the night with severe pain of spasmodic character in different parts of the abdomen, which feels full and loaded; she bears gentle pressure, but vomits occasionally; pulse feeble; looks very ill.

℞. Ol. ricini ℥vj. statim; et repet. si opus sit. Enema magnum.

℞. Hydrarg. c. cretâ, pulv. ipecac. comp. aa. gr. v., h. ss.

24th.—Is much better; has continued the pills every night, and caster-oil every morning; large quantities of knotty scybala have come away daily with very great relief; still, however, the abdomen is large and doughy.

℞. Ext. hyosc., ext. gentianæ aa. gr. v., o. n.

℞. Ferri sulph. gr. xvj.; magnesiæ sulph. ℥j.; acidi sulph. dil. ℥j.; syrupi rhœados ℥ss.; aquæ menthæ pip. ℥vijss. M. ft. mistura, sumat cochl. magn. ij. primo mane.

1852, Dec. 2.—Has had no catamenia or discharge of any kind for a year; is looking better; has kept the bowels regular with a rhubarb draught and an occasional blue pill. Has pains (apparently hepatic) across the middle of the back and right shoulder; lies best on the right side; these pains come on every four or five weeks, at which time the right hypochondrium is tender.

℞. Pil. hydr. ext. hyosc. aa. gr. v. h. s. p. r. n.

℞. Acidi hydrochlor. dil., acidi nitrici dil. aa. ℥j.; liq. tarax. ℥j.; infusi aurantii comp. ℥vij. M. ft. mistura cujus sumat cochl. magna ij., ter die.

℞. Sodæ potassio tart. manuæ opt. aa. ℥ss.; pulv. rhœi ℥ss.; aq. menthæ pip. ℥iij. M. ft. haust. sumat demid. primo mane post pilulas.

1854, April 1.—Is suffering from pains of a spasmodic character, commencing beneath the right scapula, and extending round to the left side; evacuations dark; urine rather scanty; no discharge of any kind; the right hypochondrium is tender during an attack. Has taken pil. hydr. three times during the week. Rep. pil. hydr. p. r. n.

℞. Liq. taraxaci cochl. min. j. om. nocte ex aquâ vel lacte.

℞. Lin. camph. co. ℥iiss.; tinct. opii ℥ss. M. ft. linimentum parti dolenti applicand.

In this case, it is worthy of the remark, that her three last pregnancies terminated prematurely in abortion, that the catamenia, in two years after the last abortion, had gradually assumed a menorrhagic character, and latterly had become irregular as to the periods, and variable as to the appearance of the discharge; moreover, during the last year, she had had in the intervals a watery discharge, which rendered the linen stiff on becoming dry. The uterus was larger and more bulky than natural; the os uteri inter-

num did not admit the sound; but, as is frequently seen with the urethra, allowed a larger blunt instrument to pass; the uterine cavity was increased in size, and filled with dark-brown, grumous fluid. The sum of this evidence is decidedly of an unfavorable character; it shows that the uterus was much enlarged from passive congestion, and that the upper part of the canal of the cervix was sufficiently obstructed by swelling to retain a quantity of the last catamenial discharge.

The bowels were stated to be regular; I did not, therefore, venture to give a purgative in her exhausted state, and even combined the small dose of a blue pill to a tonic, and as soon as there were evidences that the catamenia were returning, I gave her the gallic acid with good effect; the discharge, although free, did not become profuse, and she was spared the severe prostration which she had suffered on previous occasions; further observation, however, convinced me that the bowels were much loaded; purgative medicine of mild but effective character was given, and its action still further assisted by a large enema; great quantities of scybala were dislodged with striking relief, and their evacuation was followed by general improvement of her symptoms. There can be little doubt but that this intestinal accumulation had tended much to aggravate the uterine congestion, and thereby the hæmorrhage; and, *vice versâ*, that the enlarged uterus, thus pressed upon by the loaded bowels, had much increased the constipation by the pressure which it exerted upon the rectum.

I regret much that I had not the opportunity of making another examination, that I might ascertain what amount of change had taken place in the uterus, and especially how far it had diminished in size; but her improved state of health rendered it unnecessary.

[*Med. Times.*

Braun on Eclampsia during Pregnancy.

This author has recently published a lengthy paper on the above interesting subject, of which the following is a very brief abstract:

1st. Convulsions may arise, during this period, from hysteria, epilepsy, cerebral diseases, poisons, or uraemia,—resulting from Bright's disease.

2d. Their most common causes are uraemia and Bright's disease.

3d. The least frequent causes are primary cerebral diseases; and when these occur in connection with albuminous nephritis, they are the *results*, not the causes, of the convulsions.

4th. Hysteria and epilepsy may exist, during gestation, in a chronic form, so as to exercise no injurious influence either on pregnancy or labor, or on the life of the child; and they may be quite unconnected with Bright's disease.

5th. Convulsions in every form may occur from these causes in the unimpregnated female; and also in men, from all of them, except hysteria.

6th. The altered constitution of the blood, and the detention of the venous blood in the kidneys by the pressure of the enlarged uterus, are most commonly the causes of the Morbis Brightii, which occurs during pregnancy.

7th. Convulsions are caused by the urea, which is uneliminated from the blood on account of the renal disease, becoming changed into the carbonate of ammonia.

8th. When, in cases of Bright's disease during pregnancy, we find carbonate of ammonia in the blood, we may prognosticate the occurrence of convulsions; but when, at this time, the urea in the blood exists merely in small quantities, or chemically unchanged, we need not dread eclampsia.

9th. Parturition and uterine irritation neither cause this chemical transformation, nor occasion uræmic eclampsia.

10th. The abortions which so freqently happen during uraemic convulsions, are the results, not the causes of the eclampsia.

11th. There is no connection between eclampsia and labor-pains.

12th. Albuminuria does not result from convulsions arising from functional interruptions, and does not generally occur in those of an epileptical and hysterical character.

13th. Albuminuria continues throughout pregnancy, although the eclampsia attacks may have ceased; but when convulsions cease *after labor*, it soon disappears, provided the renal disease be only in the incipient stage.

14th. The disappearance of the albuminuria after parturition, is principally due to the diminished volume of the uterus.

15th. Morbus Brightii (without convulsion) may be palliated, but not removed, during pregnancy, although it readily yields to remedies after parturition.

16th. Albuminuria occurs in all cases of eclampsia which do not depend upon hysteria, epilepsy, primary cerebral diseases, or poisons.

17th. Epiliptic convulsions may occur simultaneously with those from Bright's disease and uraemia.

18th. Uraemic convulsions, when frequently recurring, occasion the death of the fœtus; but its life is not endangered by those from hysteria or epilepsy.

19th. During an attack of uraemic eclampsia, reflex sensibility is almost wholly suspended; and after it we oftener find ædema and anæmia of the brain, than hyperæmia and consecutive apoplexy before it.

20th. Venesection (according to Kiwisch, Litzman, Sedgwick, Blot, and Kink) is injurious in eclampsia; and the author has found its action very uncertain in uraemia. He considers inhalations of chloroform to be the best and safest means we possess for subduing and removing uraemic convulsions, both during pregnancy and after labor.

21st. The most certain diuretics for removing the uraemia of Bright's disease are the benzoic, tartaric and citric acids.

22d. The artificial induction of premature labor diminishes the danger of uraemic eclampsia alike to the mother and child; but this practice should not be universally resorted to in cases of Bright's disease during pregnancy, but only when necessitated by the occurrence of convulsions. Braun considers the tampon as the best method for its induction when necessary.

[The Editor of the Monthly Journal remarks: The treatment here proposed appears to us by no means universally applicable. Where the convulsions occur during pregnancy, or in an anæmic patient, or where, as happens in infantile eclampsia, they depend rather upon a superpolarity of the cerebro-spinal system that on actual toxaemia, we consider the inhalation of chloroform as unquestionably the best treatment for arresting the paroxysms. But when, on the other hand, they occur during parturition, or in the puerperal state, in a robust, plethoric patient, we should be inclined, from all we have seen of the disease, to place more confidence in copious venesection, smart purgatives, and cold to the head.

Moreover, for the induction of premature labor in such cases, we should be inclined to prefer the use of sponge-tents and uterine douches to the clumsier method of the tampon.]—*Edinburgh Journ. Med. Science.*

On the Nasal Irritations in the Treatment of Ozæna. By M. Maisonneuve, Hôpital Cochin, Paris.

All physiologists are aware that, in the act of deglutition, the pharynx and soft palate close the communication of the fauces with the nasal fossæ, by a combined movement, so as to prevent the alimentary bolus from regurgitating into the nostrils; but no one, so far as I know, has yet mentioned the production of this same phenomenon under the influence of injections of liquids by the anterior nares, nor remarked that injections propelled violently into one nostril invariably escaped by the other, without penetrating into the throat.

This fact, to which I now desire to call the attention of surgeons, appears to me to be of considerable importance in the treatment of several serious diseases, and especially in ozæna.

Ozæna,* as every one knows, is an infirmity consisting in an excessive fœtidity of the nasal secretions, depending on the protracted sojourn of blood, pus, and mucosities, in the recesses of irregular cavities, where they are subjected to the triple action of air, heat and moisture.

At each expiration, the air which traverses these cavites, is charged with putrid emanations, and forms a loathsome atmosphere around the patient; so that the victims of this disease become objects of horror and aversion.

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* *Ozæna;* ulceration of the mucous membrane of the nasal fossæ, producing fetidity of the air expired by the nostrils,—*das stinkende Nasengeschwür.*—(Palmer.) Ed.

Hitherto, our art has possessed only feeble resources against this appalling disorder. With the exception of syphilitic ozæna, in which the preparations of mercury and iodine have a direct action, the graver varieties of the disease have been regarded as nearly incurable. Cauterizations, insufflations of detersive and astringent powders, were employed indeed; patients were advised to inspire balsamic and emollient liquids, and timid injections were made with small syringes, but these remedies were but insufficient applications, and persons who used them, still exhaled the repulsive odour characteristic of the disease.

No one thought of using free and powerful injections, under the persuasion that they would penetrate into the throat.

Now numerous experiments have demonstrated to me positively that this opinion is completely erroneous, and that injections propelled with great force into one nostril, will always escape by the other.

It results from this fact, that we can readily wash out the nares, and free them from the accumulated crusts, mucus, and pus, which by their sojourn produce ozæna.

Nothing can be simpler than this operation. It suffices to introduce the canula of a large syringe into one nostril, and to push the piston energetically. A current is presently established, and foreign matters are washed away. The operation is not disagreeable, and may be executed by the patient himself.

Thus discharges are removed, the fœtor is corrected, and in a short time the morbid condition of the mucous membrane begins to amend, and a durable cure is ultimately effected.—[*Virginia Medical and Surgical Journal.*

The Humoral Theory of Epilepsy. By ROBERT B. TODD, M. D., Physician to King's College Hospital.

A clinical lecture, on a case of renal epilepsy, delivered by Dr. Todd at the Hospital of which he is the physician, was made the occasion of some important and novel suggestions, which we will present in an abridged form to our readers. The frequency of this intractable disorder, its distressing symptoms and its destructive influence on the brain and intellectual faculties of its unfortunate victim, make it worthy of the closest investigation.

Dr. Todd alludes to the discovery of the frequent association of epilepsy with *renal disease*, thus throwing an amount of light on a class of cases which have heretofore been treated almost entirely by empirical remedies, but which are now capable of being successfully managed on rational and scientific grounds. He proposes from the information thus derived, to construct a theory of the cause of epileptic fits generally. He says:

"I hold that the peculiar features of an epileptic disease are due to the gradual accumulation of a morbid material in the blood, until it reaches such an amount that it operates upon the brain in,

as it were, an explosive manner; in other words, the influence of this morbid matter, when in sufficient quantity, excites a highly polarized state of the brain, or of certain parts of it, and these discharge their nervous power upon certain other parts of the cerebro-spinal centre in such a way as to give rise to the phenomena of the fit. A very analogous effect produced is that which results from the administration of strychnine, which is best seen in a cold-blooded animal, as the frog. You may administer this drug for sometime, in very minute quantities, without producing any sensible effects, but when an accumulation has taken place up to a certain point, the smallest increase of dose will immediately give rise to the peculiar convulsive phenomena."

This, then, may be considered as the humoral theory of epilepsy. A morbid matter is generated which infects the blood. This morbid matter has a special affinity for the brain, just as the strychnia has for the spinal centre. The source of this morbid matter may be in the nervous system, probably in the brain itself.

To give a more definite character to this humoral theory, we need to discover a morbid matter in the blood in every case of epilepsy, and this has to a certain extent been accomplished.

The clue to a discovery of this kind was first given by the observations of Prevost and Dumas upon the effect of *excision of the kidney*. They found that a removal of the kidneys was followed by an accumulation of urea in the blood, resulting in convulsions and coma, and an epileptic state. The clinical observations of physicians being directed to this point, soon developed the fact that disease of the kidney was apt to be followed by epileptic symptoms, and that in these cases, urea was found in the blood.

"A connexion was thus clearly established between the presence of urea in the blood, defective renal secretion, and the epileptic condition; but whether the active poison is urea, has not been yet decided. Frerichs has lately affirmed that the morbific agent is carbonate of ammonia, a product of the decomposition of urea. All that we really know is, that in certain states of diseased kidney, when the secretion falls below a certain point, urea will accumulate in the blood, and epileptic seizures will ensue. Should the patient die, we find no brain lesion to account for the phenomena, but unequivocal evidence of diseased kidney.

Imperfect as is the present state of our knowledge on this point, may we not see in the facts thus detailed a gleam upon the horizon announcing approach of some brilliant discovery which no doubt the advancing state of organic chemistry will yet develop, and which will throw great light on the obscurest disease in the whole range of maladies which affect the human frame."

The experiments of Frerichs went to show that the comatose and epileptic symptoms ensuing on kidney disease were attributable to a development in the blood of carbonate of ammonia, arising from decomposition of the urea. This carbonate of ammonia is the poisonous matter. Frerichs injected this substance into the veins

rats, and an epileptic condition was induced, which passes away as soon as the carbonate of ammonia is eliminated from the system. He also found that when urea was injected into the blood, carbonate of ammonia may be detected in the breath of the animals by holding a rod dipped in hydro-chloric acid under the nose, when the charcteristic white fumes indicate the presence of an alkali, and the blood is likewise found to contain it in an appreciable quantity.

Dr. Todd instituted a series of experiments in his hospital for the purpose of verifying Frerichs's conclusions, but though urea was easily detected in the blood, the tests for carbonate of ammonia were not satisfactory.—[*Ibid.*

A practical inquiry into the advantages derivable from the Vapour of Chloroform, as a local application to the surface of the Skin and Mucous Membrane under various conditions. By S. L. HARDY, M. D., F.R.C.S., Examiner in Midwifery and Diseases of Women and Children in the Royal College of Surgeons, Ireland; Ex-Assistant-Physician, Lying-in Hospital, Rotundo; Physician to the Institution for Diseases of Children, &c., &c.

Since the local application of chloroform vapour was first introduced to notice, there has existed considerable discrepancy of opinion as to its efficacy. In some instances the results obtained by it have been most satisfactory; while in others we are told it was perfectly inert.

By an inquiry into the advantages derivable from its application to the surface of the skin and mucous membrane under various conditions, it seems to me that much of the uncertainty which at present prevails as to its utility might be removed, and an amount of knowledge acquired of so practical a nature as would remove the apathy of some who think little of its worth, and direct, with more certainty, the efforts of others who have resorted to it in cases in which it could not have been expected that its influence should have been exerted with any decided effect.

In order to prosecute this inquiry, I have collected a number of cases from various sources, which are, in some instances, accompanied with observations by men whose opportunities for observing the action of remedies should render their opinions of considerable value.

In applying chloroform vapour to either skin or mucous membrane, it is necessary to attend very particularly to the condition in which those tissues are at the time, as the effect of this agent will be more or less marked according to circumstances. The subject therefore should be considered under the four following conditions:—

1ST. THE EFFECTS PRODUCED BY THE VAPOUR OF CHLOROFORM WHEN APPLIED TO THE SURFACE OF THE UNBROKEN SKIN.
2ND. DITTO, WHEN THE CUTICLE IS REMOVED.
3RD. DITTO, WHEN APPLIED TO MUCOUS SURFACES UNBROKEN.
4TH. DITTO, WHEN APPLIED TO MUCOUS SURFACES IN AN ABRADED CONDITION.

1ST. THE EFFECTS PRODUCED BY THE VAPOUR OF CHLOROFORM WHEN APPLIED TO THE SURFACE OF THE UNBROKEN SKIN.

We are naturally led to expect but little effect from the application of vapours to the surface of the body, the cuticle being entire. Nevertheless, however contrary it may appear, there seems to be sufficient evidence, from the results obtained in many instances, to prove, that even under such unfavorable circumstances, the vapour of chloroform exerts very considerable influence. The following cases are given in illustration:—

No. 1. *Case of Femoral Hernia.*—At a meeting of the Surgical Society, held on the 8th of April last (reported in the Medical Press, April 19th), Dr. Forrest detailed the following case:—

"I was called to a lady, aged 60, who had suffered for several years from femoral hernia. On the present occasion, the tumor protruded a good deal, and was so exceedingly painful that the taxis could not be properly applied. I now directed a stream of chloroform vapour over the part with the happiest results. It completely relieved the patient of the distressing sensations caused by the strangulation, and afforded opportunity for resorting to the surgical manipulations usual in such cases."

No. 2. *Case of Tetanus.* (Under the care of Dr. KIRKPATRICK, Medical Attendant to the North Dublin Union.) ——, a labourer, ætat. 30, was admitted into the North Union Workhouse, June 7, 1854, sent from Manchester Infirmary, where he had been a patient, with disease of the right hip. In the workhouse a part of the treatment consisted in a large caustic issue, made with potassa cum calce, over the ileum, an inch external to the seat of pain. On the 12th day the slough came away on the poultice without any suffering. On the morning of the day following he was seized with spasms, which commenced at the right side low down, and rapidly engaged all the muscles of the trunk, both anterior and posterior. Before two o'clock p. m., the throat and jaws were affected, the mouth being opened with pain and difficulty. On the 21st Mr. Robertson, instrument-maker, spent several hours applying the vapour of chloroferm locally.

On the morning of the 22d he lay on his left side, with the right extremity extended and resting on a stool behind him outside the bed, as he was quite unable to flex or draw it up to him, nor could this be done for him owing to its rigidity. He complained of great pain in the issue, the posterior lower third of the thigh, and

in the calf of the leg. Chloroform vapour applied by the vapour douche to each of those places relieved him in about ten minutes, and in about twenty he was able to raise and draw his leg into the bed. He then turned on his back, and afterwards during the day was able to rise and sit on a chair.

Dr. Kirkpatrick remarks, throughout the course of the disease (which terminated fatally on the ninth day), chloroform was used to relieve agony by inhalation and local application of the vapour. The action of the remedy was most satisfactory in producing relief. A few drops on a piece of lint held to his face was sufficient to cause tranquil sleep.

The local application of the vapour was of marked service in relaxing severe spasm of the right lower extiemity, also in causing some relaxation of the muscles of the jaw, so that the teeth could be more separated. It also diminished the pain when applied to the ulcer on the hip and to blistered surfaces on the spine and epigastrium. It was confined to the affected parts by means of a glass bell attached to the tube of the douche. It was also caused to surround the pelvis by the use of air-tight drawers: and lastly, it was thrown into the rectum.

No. 3. *Second Case of Tetanus.* (Under the care of Dr. Woods, Physician to the Killyon and Ballybrit Dispensaries in Parsonstown and Roscrea Union.—A poor man received a lacerated wound of the thumb and forefinger. On the fifteenth day afterwards he felt rigidity of the muscles of the neck, with difficulty of swallowing; in fact, trismus had set in. The disease increased for five days, but with the exception of an occasional spasm, extending from the diaphragm out through the back and up the back of the neck, producing slight opisthotonous, the rigidity and spasm were confined to the neck and jaws. I treated him with Cannabis Indica, mercurial and belladonna frictions, occasional enemas of turpentine and tobacco, croton-oil purgatives, blisters to the hypochondrium, &c.; but on Saturday (the day I received the douche) he was in the following state:—Neck and jaws quite rigid; so much so, that a piece of wood, which the friends had placed between his teeth, was too firmly held there to be removed; inability to swallow for thirty-six hours; risus sardonicus very marked; occasional spasm of diaphragm, producing slight opisthotonous. Altogether, his state was such that I, as well as another professional man, said there was no hope of his recovery. Under these circumstances I applied the douche. I continued forcing the vapour of chloroform on the muscles of the neck and jaws for perhaps half an hour. At length the spasm gave way, the piece of wood so obstinately fixed between the teeth came out, and he so far recovered the muscular power as to open his mouth to put out his tongue, and he managed to drink a cupful of broth. I have rarely felt more pleasure than when witnessing the almost miraculous effect the douche produced. The rigidity of the jaws and

neck has not been as great at all since the douche was used, now twenty-four hours.

Parsonstown, August 6, 1854.

In answer to a letter, inquiring from Dr. Woods whether he thought the vapour could have been inhaled while he was applying to the under part of the lower jaw, I received the following reply:—

"*Dear Sir*,—I have just seen the man with tetanus, and although not quite free from it, I have no doubt of his recovery. When I applied the douche to the rigid muscles of his neck, he must have inhaled some of the chloroform, as I gave it to him liberally (there was, however, no appearance of it as to sleep, &c.); but I made to-day a very satisfactory trial of the douche locally. The spasms in the back were distressing him very much this morning, causing slight opisthotonous and intense pain. I stripped and watched the back for some time, and at every spasm the spine was bent in, just at the lumbar region, the head slightly thrown back, and a beautiful radiation of muscular contraction occurred, having its centre in the lumbar vertebræ, and running up the latissimi dorsi and down the glutæi on each side. I immediately applied the douche assiduously to the loins, and kept up the action for about a quarter of an hour. He experienced the greatest relief, and longer duration of ease between the spasms. I showed the friends how to use the douche, leaving them a bottle of chloroform; and this evening, after having it thus applied to the back frequently, and always with marked relief, he has been for some time entirely free from pain, and ascribes the relief altogether to the douche. I asked him particularly about it, and he says he could not be mistaken. The pain was always soon mitigated, and he hopes now nearly entirely removed by the application. I was careful not to let him get any chloroform by inhalation, in order that the test might be the stronger, and I have no doubt but that the douche acted altogether through the integuments, and most beneficially. The only treatment beside the douche at present adopted is, croton-oil purgatives, combined with a little opium. I am almost sure the man will get well; if so, I will ascribe his recovery to the douche. I remain yours very truly,

Parsonstown, August 10, 1854. THOMAS WOODS."

My Dear Sir,—The man who had tetanus is now quite recovered. I remain, &c., THOMAS WOODS.

Parsonstown, August 27, 1854.

No. 4. *Phthisis.*—A lady, in the ninth month of pregnancy, far advanced in phthisis, suffered very much from the frequency of cough, particularly during the night, which various sedatives failed to relieve. Over the affected lung, where the skin was unbroken, but tender, owing to frequent blistering, I had chloroform vapour applied by the douche, and confined to this part by a bell,

shaped receiver. It had the effect of quieting the cough and of enabling the patient to sleep much better.

Chloroform manufactured in two different places was used in the treatment of the case; that which caused the most soothing effect felt more pungent on the skin during its application than the other.

No. 5. *Case of Neuralgia.*—The *Medical Press* for June 28, 1854, p. 410 (Mems from our London Correspondent), informs us "that a long discussion has again taken place in Paris relative to Dr. Hardy's apparatus." M. Bichât says the local action of chloroform is proved by results truly surprising ("les resultats vraiment suprenants"), and gives two cases of his own which had resisted opiates and quinine: one in particular, of horrible agony in the arm and shoulder from neuralgia, cured by Dr. Hardy's apparatus.

No. 6. *Dysmenorrhœa.*—In the month of July last, I was hastily summoned to an unmarried patient, ætat. about 26. On my arrival she was in bed, tossing about her limbs and grinding her teeth, her countenance expressive of great suffering, which came on in paroxysms. At each exacerbation, she pressed firmly with her hands over the region of the uterus, which led me to suspect the approach of a menstrual period as being the cause of her distress. One of her friends afteawards told me she was subject to severe pain on these occasions. A sinapism laid over the abdomen had no effect in rousing her, nor was consciousness restored until a handkerchief, moistened with chloroform vapour, was applied to the vulva, which immediately caused her to exclaim, owing to the heat imparted by it. In about five minutes she had no pain whatever. The secretion soon followed without any more disturbance.

No. 7. *Cholera.*—During the last few months instances of diarrhœa have been very prevalent in Dublin. The administration of chloroform in frequently-repeated doses of from fifteen to twenty-five drops in a little cold water had a most excellent effect in relieving nausea in those cases, and of imparting a sensation of general warmth; but as the influence exerted by this method of exhibiting it was of short duration, a much more decided and permanent benefit was obtained by applying the vapour by means of a sponge, moistened with chloroform, and placed in a tumbler. This applied over the epigastrium never failed in giving relief, and could be kept on constantly without the least inconvenience to the patients, who very soon became so convinced of its efficacy, that they anxiously wished for its continuance. (Care was necessary not to allow the fluid chloroform to touch the skin, as it felt so very hot; this, however, was easily accomplished by using a sponge sufficiently large to fill the end of the glass).

No. 8. *Encysted Tumors of the Scalp.*—My dear Hardy—I have just used your anæsthetic vapour douche with such pleasing result that I cannot refrain from letting you know, as I am sure it will gratify you. A patient had four encysted tumors to be removed from the scalp. With the first and largest, I used the douche. She expressed the greatest surprise when informed that it was removed. With the second I did not use the douche. With this she experienced considerable pain during the operation, and subsequently, even after the other two were excised (with which the chloroform and douche were used, and with equal advantage as in the first) this continued to give pain. Some months ago Dr. Montgomery and I removed an encysted tumour from the scalp, having previously used the chloroform as you direct; but as there was but one tumour, and the patient a particularly good one, we could not judge from what amount of suffering she had been relieved. Believe me to be yours truly,

Merrion-square, October 18, 1854. J. Smyly.

No. 9. *Gout.* (Treated by Dr. V. Renouard.)—On the morning of the 25th the pain was most intense. It increased during the day, and in the evening wrung cries from the patient, who writhed upon his bed, biting and tearing the sheets. The night passed without the least relief, notwithstanding the internal and external use of narcotics. The foot was œdematous; the skin was tense, and of a shining rose-colour. On the morning of the 26th, having exhausted my resources, and being unable to remain an inactive spectator of such acute sufferings, I proposed the local application of chloroform, which was at once agreed to. Having procured Hardy's instrument, I commenced at noon the insufflation of the anæsthetic vapours, directing them chiefly to the most painful part. After twenty minutes' application, which was twice or thrice interrupted, reducing the real duration to sixteen or seventeen minutes, the patient felt well enough to request its suspension. He did not say that he was free from all suffering, but that he was considerably relieved. The part subjected to the vapour of chloroform had become pale and cold, instead of red and burning, as it had been before. Moderate pressure could now be made without exciting the sensibility of the patient, who so short a time before could not endure the slightest touch. The calm lasted an hour and a half or two hours; the pain subsequently appeared to return, and continued increasing until evening. When I saw the patient again, between eight and nine o'clock, he was suffering much, although less than on the preceding evening; he was particularly apprehensive about the night. At the same time, the central point of the pain had changed its place a little; it was nearer the internal ankle. The anæsthetic vapours were again applied uninterruptedly for fifteen minutes. All suffering ceased; what had been the principal seat of the pain could now be tolerably strongly leant on without the patient feeling it. After a few

minutes he fell into a deep sleep, which lasted two hours. On awaking, he experienced merely a feeble sensation of pain, some transitory twitchings returning at shorter or longer intervals, which did not prevent him from taking several other naps in the course of the night. From this day he quickly recovered. The attack was shorter than those of the two preceding years. The resolution of the congestion appeared to be more rapid than usual.

On the foregoing case, the editor of the *Revue Médicale* observes—"We cannot, in this case, fail to recognize the beneficial effects of the vapour of chloroform on the intolerable pain of gout; but its influence on the resolution of the œdema, although probable, does not appear to me to be sufficiently proved."—[*Gazette des Hôpitaux*, 23rd September, 1854, p. 451.

No. 10. *Rheumatic Gout.*—On the 26th of October, a gentleman, who had suffered severely from frequent attacks of rheumatic gout, was directed by his medical attendant to have the vapour of chloroform applied to his foot, which was exceedingly painful. Mr. Robertson (the maker of the instrument), by means of the vapour douche, gave a bath of chloroform and warm water vapours combined. In a quarter of an hour he felt perfectly easy. Having dined with a friend, and partaken of champagne, his distress returned; and on the 28th of October the bath was repeated. In three minutes all suffering was removed; and after its use for a quarter of an hour, he said he never was more free from pain in his life. On the 30th he had another bath for a mitigated return of the pain, and with equally favourable results.

References.—See *Dublin Journal* for Nov., p. 315:—"The effects of chloroform vapour on the nipple of a female breast." Aso, Case 6—"Its effects when applied to the surface of a breast affected with inflammation."

2ND. THE EFFECTS PRODUCED BY THE VAPOUR OF CHLOROFORM WHEN APPLIED TO PARTS DENUDED OF CUTICLE.

When the cuticle is removed, either by abrasion, vesication, ulceration, or incision, the vapour of chloroform is enabled to act with much greater intensity than when the skin is unbroken. Whenever it is first brought in contact with parts in this condition, some patients complain of heat, others say it feels cool; in a few minutes a sensation is imparted of ease and freedom from pain, which in some instances is of very considerable duration. The following cases are given in illustration:—

No. 11. *Case of Anthrax.* (From Dr. BENSON, President of the Royal College of Surgeons of Ireland.)—An unmarried lady, ætat. about 36 years, highly nervous, and very impatient of pain, lately consulted me for anthrax, situated on the back of the neck, which was a little ulcerated and most painful. I proposed the inhalation of chloroform, to which she strongly objected, but con-

sented gladly to its local application. The vapour was closely confined to the sore, and first produced a sensation of extreme heat, which was soon succeeded by perfect relief from suffering. A free crucial incision was then made, which did not give her the slightest uneasiness. She said the operation had not hurt her in the least; everything afterwards went on favourably.

No. 12. *Second Case of Anthrax.* (Communicated by E. A. WHITE, Esq., M.R.C.S.I.)—A gentleman, ætat. 35, of very excitable temperament, consulted me for an anthrax situated on the nape of his neck, which was highly inflamed, ulcerated, and exquisitely painful. I applied chloroform vapour by means of the douche, which at first produced a hot sensation, as if a jet of steam had come upon it; this feeling was but momentary. I continued the application for about three minutes, then pricked the surface of the tumour without causing any indication of pain, and finally laid it open by an incision of an inch and half in length; the patient being wholly unconscious of the operation having been performed.

No. 13. *Syphilitic Ulcer.—Cases illustrating the Effect of Chloroform Vapour when applied to Ulcers.* (From Dr. WILMOT, Surgeon to Steevens' Hospital.) My dear Hardy: Of the cases in which we tried the local application of the vapour of chloroform in Steevens' Hospital, two seem to me more particularly worthy of notice, as showing not alone its efficacy in producing local anæsthesia, but the conditions which are necessary for its complete manifestation. One case is that of a man who suffered from extensive syphilitic ulceration on the forepart of the right leg, accompanied with superficial exfoliation of the tibia, and some periosteal inflammation along the bone. This ulcer was extremely painful, and in one spot especially, where the ulcer had cicatrized, the slightest touch was insupportable. I thought this an excellent case in which to test the efficacy of the local application of the vapour of chloroform. Your instrument (*the one last invented*) was accordingly called into requisition. After it had been worked for about two minutes, the patient expressed himself greatly relieved from pain, and in three minutes more the anæsthesia was so complete that he allowed the part to be handled, and evinced no pain when firm pressure was made with the fingers along the bone. This tolerance of pressure was very remarkable at the spot where the sensibility had been so much exalted. I am certain that had it been necessary in this case to have made an incision, a little further application of the chloroform vapour would have rendered the operation painless. The patient stated that the anæsthesia lasted a considerable time.

No. 14. *Ulcer on the Leg.*—The second case is that of a woman who had an extremely painful ulcer on the right leg, a little above

the external malleolus. She could not bear it to be touched, and refused to let it be strapped, owing to the severe pain produced by the necessary pressure. Your apparatus was resorted to; and in a very short time the sensibility of the sore became blunted, and she permitted it to be handled and firmly pressed with the fingers.

These two cases strikingly demonstrate the power of the vapour of chloroform to produce local anæsthesia. The employment of it in certain ulcers of the leg, will, I feel confident, be found not the least useful of the purposes to which it may be applied. Every practical surgeon is acquainted with a small irritable ulcer which shows itself on the leg, generally above either malleolus. This ulcer is remarkable for being excessively painful, particularly on pressure, so much so that few patients have fortitude enough to permit the adoption of the most efficient plan of treatment—strapping. Now, in such cases your instrument would prove invaluable. By it the ulcer would be deprived of its sensibility, and the strapping (which is beneficial nearly in proportion to the tightness with which the straps are drawn) could be accomplished without any pain. With respect to the conditions necessary for the production of complete local anæsthesia in any of the external surfaces, it appears to me that the part to which the vapour is applied must be free from cuticle, or merely covered by a delicate pellicle, as in a recent cicataix; or better still, that it should be in a granulating state. To expect that the agent should act through a thick cuticle, is unreasonable. How many remedies and plans of treatment have disappointed expectations simply from a want of due regard to the conditions essential to their success? Believe me very truly yours, SAMUEL G. WILMOT.

Stephen's-green, August 3, 1854.

No. 15. *Chloroform Vapovr in the insertion of an Issue.* (By M. DANYAN.)—"M. Richet said—I shall, finally, allude to the happy effects of the vapor of chloroform when thrown on ulcerated surfaces, which have been made known to us, by Dr. Hardy of Dublin, M. Moissenet and my colleague, M. Gosselin.

M. Danyan said—Having had to establish an issue on M. Roux, I made use of Dr. Hardy's apparatus. I employed the Vienna paste. I directed the vapour of ether for ten minutes on the nape of the neck, where the issue was to be formed; the pain was completely annihilated."—[*Gazette des Hôpitaux*, June 13, 1854, p. 280.

No. 16. *A painful Stump treated by the Application of Chloroform Vapour.* (Under the care of M. LARREY.)—What appears certain is, that the vapor of chloroform freely directed to a painful point, immediately allays the sufferings of the patient. Thus at Val-de-Grace, after an amputation of the thigh, the stump having become excessively painful, M. Larrey made use of Dr. Hardy's apparatus, and as soon as the vapour of chloroform came in con-

tact with the wound, the pains were soothed.—[*Journal de Médecine et de Chirurgie Pratiques*, March 1854, p. 99.

Reports of three Cases of Carcinoma treated by Local Application of the Vapour of Chloroform. (From Dr. GEOGHEGAN, Surgeon to the City of Dublin Hospital and Hospital for Incurables, Professor of Forensic Medicine, Royal College of Surgeons, Ireland.)

Dear Sir,—The appearance of your important observations on the local applications of chlroform vapour has led me to direct its employment in the cases of cancer at present under my care at the Hospital for Incurables. Although the trials which I have been as yet enabled to make have not been sufficiently numerous to furnish a just estimate of the value of your apparatus, I can, however, state, that the results already arrived at have been for the most past decidedly encouraging. I, therefore, feel desirous of submitting some of them to your attention.

No. 17. *Ulcerated Cancer of the Axilla.*—In one case of extensive ulcerated cancer, involving the pectoral region, the axilla, and lower part of the neck, the application of the vapour (by means of the perforated ivory jet) was followed by speedy relief of pain, which the patient assures me continued for three days.

No. 18. *Ulcerated Cancer of the Lip.*—In the second instance, where the disease has swept away the lower lip and chin, and which is attended by severe lancinating pain in the vicinity, the use of the vapour for about a quarter of an hour, was followed (to use the patient's description) by "a cool and numb feeling," extending through the affected part. The pain soon began to diminish, and in eight minutes had almost disappeared. Relief continued for several hours, when the pain returned severely. A subsequent application was followed by nearly similar results.

No. 19. *Ulcerated Cancer of the Mamma.*—Wishing to observe the action exerted through the unbroken skin, I directed an application to the integument below the axilla of a female laboring under ulcerated cancer of the mamma. In one minute she experienced a sensation of numbness in the part touched by the vapour; in seven minutes this had spread along the whole arm, "as if streams of water were being poured upon it." The pain by this time had but very slightly decreased, nor was there any further diminution of it. On a subsequent occasion, the vapour was applied to the *ulcerated surface;* in one minute a feeling of warmth had spread down the arm; in seven, the pain was distinctly less, and in seventeen was greatly relieved. Like all other remedies, however, a beneficial action is not uniformly secured. Accordingly, in one case of cancer of the anus, perineum, and thigh, the patient states that she experienced no relief. I suspect, however, that in this instance the application was not continued for a suffi-

cient length of time, nor was the vapour maintained by any appliance in contact with the surface. It strikes me that some arrangement by which the vapour might be effectually secured, and which would permit such continued pressure as would introduce it into the capillary circulation of the part, and hence bring it more intimately in contact with the nervous filaments, would add much to the value of your apparatus, and render the relief of pain more durable than I have found it in some cases. A frequent and careful observation of the action of anæsthetics encourages me in this belief; for in some instances where the anæsthesia produced by these agents (introduced by inhalation) has been perfect, the action of the latter would appear to depend *exclusively*, or nearly so, upon their *direct circulation* through the superficial textures, and their consequent, though indirect, application to the fibrillæ of the sentient nerves of the cutis. This is, I think, sufficiently evidenced by the singular phenomenon which has attracted the attention of operators as regards the action of sulphuric ether, and which I have myself more than once witnessed in a striking manner—namely, the total absence of any disturbance of consciousness and volition, or indeed of any of the mental faculties, notwithstanding the completeness of the local effect above alluded to. This result, according to my experience, is much rarer under the influence of *chloroform;* and as it is precisely *that mode of action which is most desirable*, if it can be secured by the *local* application of the vapour even in but a proportion of the cases where pain is a prominent evil, much will have been gained. As facts accumulate, and a more extended use of local anæsthesia suggests further modifications of the apparatus, your method will, I doubt not, prove of permanent benefit in practice. As respects its application to operative surgery, although the local use of the vapour can scarcely be expected to offer an available substitute for inhalation in the greater surgical undertakings, yet from the facts that have come to my knowledge, I cannot doubt its promise of utility in the various minor operations. I remain faithfully yours,

York-street, July 5, 1854. T. G. Geoghegan.

No. 20. *Cancerous Tumour in the Neck.* (Under the care of Dr. Mayne, Physician to the South Dublin Union.)—*My dear Sir*,—The case to which I yesterday alluded in conversation with you, was that of a lady who lately consulted me for a malignant tumour situated at the right side of the neck. Several consultations with Dr. Ireland, Mr. Cussack, and Sir P. Crampton, resulted in the decision that no operation was justifiable. I have seldom witnessed more poignant suffering than this lady endured for several months. Opium afforded her but little relief. Various other sedatives and narcotics were also tried in vain, yet I can confidently assert that the chloroform douche never failed to alleviate her sufferings temporarily; and of this she felt so thoroughly convinced, that for many weeks before her death she was in the

constant habit of using it herself, by means of one of the instruments sold by Mr. Robertson. This case ran rapidly into open cancer. Believe me yours very truly, ROBERT MAYNE.

13, *Upper Glocester-street*, July 18, 1854.

No. 21. *Cancerous Ulceration of the Forehead, Orbit, &c.* (By Dr. MOISSENET.)—The medical journals inform us that a Dublin practitioner, Dr. Hardy, has just invented an apparatus for the purpose of injecting the vapour of chloroform into the vagina in order to allay the violent pain caused by cancer of the uterus, and that it has completely succeeded. The results obtained by the Irish physician have led to several trials on the part of others, and in a note read at the Medical Society of the Hospitals, Dr. Moissenet has acquainted us with many very interesting cases, in which he has obtained, with Dr. Hardy's apparatus, effects truly unlooked for. He has succeeded, especially in a case of cancroid ulcer of the forehead, which had successively invaded the orbit, the eye, and a portion of the cheek, in instantly and repeatedly allaying dreadful sufferings, which had resisted all known remedies.—*Gazette des Hôpitaux*, May 27, 1854, p. 252. [*Dublin Medical Press.*

[To be concluded in February Number.]

Success of different methods of treating Cholera. By JOHN CRAWFORD, M. D., Physician to the Glasgow Cholera Hospital.

The different modes of treatment employed in the various forms of choleraic disease, with their respective results, are exhibeted in the following table:—

Table showing the Results of Five different modes of Treatment.

	1. Salines alone.	2. Salines with adjuncts.	3. Calomel.	4. Stimulants	5. Astringents with opium.	Total.
Diarrhœa,	2	9	0	1	26	38
Cholera,	13	53	13	6	29	114
Collapse,	5	32	12	24	0	73
						225
CURED.						
Diarrhœa,	2	9	0	1	24	36
Cholera,	13	46	7	1	24	91
Collapse,	0	7	3	2	0	12
DIED.						
Diarrhœa,	0	0	0	0	2	2
Cholera,	0	7	6	5	5	23
Collapse,	5	25	9	22	0	61

In reference to this table, the following explanations may be necessary. In the first place, in all, or mostly all cases, counter-irritation to the epigastrium and abdomen, by means generally of sinapisms—occasionally of turpentine and ammoniacle epithems,

and in many cases by blistering—was used. It must, therefore, be understood, that the cases in the first column shared the benefit of this practice, though "salines alone" were administered as medicines. The "adjuncts" of the second column were almost exclusively opiate enemata and stimulants—wine, brandy, and ammonia; the opiate enemata being generally given in cases of cholera; and the stimulants—though cautiously—in collapse, or cases of cholera verging on that state. In choleraic diarrhœa, catechu and opium by the mouth were also occasionally used as adjuncts. The "salines" employed were the following:—1st. The combination of salts proposed by Dr. Stephens, viz., chlorid. sodium, ℈i; bicarb. sod., ℥ss.; chlorat. potass., gr. vii. These quantities dissolved in water were given every half hour, every hour, or every two hours. 2nd. The saline enema of the same writer; a table spoonful of chloride of sodium dissolved in warm water—employed only in collapse. And here, to avoid recurring to the subject again, I may mention that, although in several cases benefit appeared te be derived from its use, the advantage was only temporary, even when every precaution was taken to administer it properly. 3rd. The bicarbonate of soda, used as afterwards described. 4th. The same followed by acidulated draughts, as afterwards explained. And, lastly (chiefly in cases of choleraic disease, with irritability of the stomach), the ordinary effervescing soda-powders.

Calomel was given in various doses in different cases—grs. x.—℈i. and upwards, to produce in the first instance a sedative effect on the patient (a result which it generally failed to accomplish); in smaller doses, gr. i.—v., at intervals varying from a quarter of an hour to three hours; and in some cases in doses of gr. i. every five minutes. Upwards of 110 grs. have been continuously exhibited in this way.

Under the head of *stimulants*, I have also included—somewhat strangely, it may appear—the cases in which creasote and hydrocyanic acid were given to allay vomiting; but in almost all these cases, alcoholic stimulants were also given. That both creasote an hydrocianic acid are useful in checking the vomiting in cholera (a combination of the two, 3 drops of the former and 2 of the latter, probably answers best) is undoubted; but in this respect they are far inferior to the bicarbonate of soda, and the creasote seems frequently to be very nauseous to the patient.

As to the effect of *stimulants*, the fourth column tells its own tale. It is however, to be noted, that a number of cases—hopelessly advanced in collapse, and even moribund—were admitted, in which nothing could be done beyond endeavoring to keep up the heat and administering stimulants. These cases, hopeless under any treatment, no doubt swell the mortality under this head; but as a general rule, alike in choleraic diarrhœa, cholera, and collapse, the exhibition of alcoholic stimulants, except in a limited number of cases, and then in small quantities, has not, so far as I have

seen, been productive of benefit. They are not even agreeable to the patient. Even in the prostration of collapse, the habitual drunkard will be found to turn with loathing from the proffered wine or spirits, and beg for cold water instead.

The *astringents* referred to in the fifth column, as conjoined with opium, were principally catechu, aromatic sulphuric acid, and acetate of lead—combinations found principally useful in choleraic diarrhœa and the milder forms of cholera. On the whole, I am inclined to prefer the acetate of lead and opium in pill (diacetat. plumb. gr, ii,-iii., op. gr. i.) This was also found very useful in the diarrhœa which occasionally recurs after a smart attack of cholera. In collapse, beyond an opiate enema, if the purging still continued, I would have nothing to do with the opium.—[*Glasgow Medical Journal.*

Opiate Inhalations and Fumigations. By Dr. Lombard, of Geneva.

I am aware that the attempt has often been made to introduce opium in the nasal fossæ, chiefly for the abortive treatment of coryza, either by means of injections of water and laudanum or by making the patient snuff up a powder of sugar and morphine mixed. But the end I wish to attain to is very different; the greater tenuity of the smoke, not less than its warmth, allows it to penetrate, without pain as without difficulty, into the crevices of the nasal fossæ; a result which cannot be obtained by a liquid, still less by a powder, however impalpable. The method that I am about to submit to your notice, after two years and a-half of clinical observation, seems to me very different from those of which I have just spoken, and I can affirm, without the least fear that experience will contradict my assertion, that the inhalation of opium smoke into the nasal fossæ is a most useful therapeutic resource. I shall first mention some of the cases in which it has prospered admirably in my hands. You have, no doubt, met with, in your practice, cases of coryza, accompanied with lancinating pain in the frontal sinus; pain which sometimes becomes very intense. In such cases it is, that I have seen the opium fumigations produce truly marvelous results; pain has ceased as if by enchantment, and an almost intolerable state has been succeeded promptly by remarkable relief.

In a case of this kind that was under my care some eighteen months ago, the pain was so intense as to make the patient cry out, and induce him to believe, although of a firm and by no means pussilanimous disposition, that he was suffering from a dangerous cerebral affection. These pains came on in the course of a catarrh, accompanied by intense coryza, produced by a cold blast playing all night on the face of the patient. Two or three fumigations were sufficient to remove the pain. Some slight return of the same suffering yielded promptly to the same remedy, to the exclusion

of all other treatment. A cure so prompt and easy gave me confidence in a remedy that I then merely experimented with, especially when my memory recalled a great number of cases in which other methods of treatment had failed, and the frontal pain had continued, in spite of the most varied medication.

The opiate fumigations are of use not only in the continued neuralgic pain, as in the patient already alluded to, but also in the periodic form of that disease; for this circumstance does not prevent the success of the inhalation of opium. In fact, in the majority of cases I have had to treat, the frontal, temporal, or zigomatic pain accompanying catarrhal coryza is met with under the periodic form; nevertheless, this method is quite sufficient to cure the malady, without the assistance of any other medicament. Two patients, on whom I tried the effect of opiate fumigation in February, 1852, were both attaked with coryza, complicated with periodic pain. In one of them the access returned regularly at eight o'clock in the morning, and lasted till four o'clock in the afternoon; whilst, in the other, the afternoon was the time at which the return of the periodic frontal pain took place; in both cases the opiate fumigations, without any other treatment, brought about a prompt recovery. It is not only in the cephalalgia connected with coryza, that I have thus employed opium, but also in certain cases where the neuralgic pain was symptomatic of some other morbid affection, or idiopathic. After making mention of a variety of other cases in which Dr. Lombard had adopted this mode of treatment, so as either to cure or considerably relieve his patients. he proceeds to consider the doses of the drug, and the manner in which it should be used.

I commenced with five centigrammes (about one grain) of pulverised opium, mixed with as much sugar, and sometimes an equal part of gum benzoin; later I orderd ten or fifteen centigrammes in each fumigation; but the intermediate doses of ten centigrammes seemed to answer all the indications, and produce the desired effect. I have repeated the fumigations two or three times a day, but sometimes having had recourse to them oftener, I did not regret it, having witnessed no bad effect from it.

As regards the mode of administration, it is as simple as possible:—I heat in the fire a thin plate of iron, as a shovel for example, and I direct the patient to take the powder in small pinches and throw it on the hot iron, taking care to hold the head over it, so as to breathe the fumes freely not only through the nostrils but also through the mouth. I have often employed the smoke of opium, obtained by another method, which consisted in mixing a solution of opium with agaric prepared and properly dried. By soaking a certain quantity of amadou in a known quantity of this tincture, we can administer a dose as exact as of the powder itself. The amadou so prepared is lit and burnt under the nose of the patient. In fine, I do not hesitate to advise the employment of opiate fumigations in all cases of neuralgia occupying the frontal, temporal, or

zigomatic regions, either of a continuous or periodic character; although it is to be remembered that it is above all in the catarrhal neuralgia, often complicating coryza, that the employment of my method is found to succeed most satisfactorily.—[*Dublin Hospital Gazette*, from *Gaz. Médicale.*

Instructions for using Benumbing Cold in Operations. By JAMES ARNOTT, M. D.

Although there are several modes of employing intense cold as an anæsthetic, I shall here confine myself to the most simple and generally applicable of these—viz., the placing a frigorific mixture immediately on the part, or with the interposition only of a piece of thin gauze or tulle containing it. This piece of gauze (formed for the sake of convenience, into a small net or bag), the components of the frigorific mixture, a canvass bag or coarse cloth, a mallet or flat iron, a large sheet of paper, a paper-folder, and a sponge, constitute all the articles required for congelation. The common frigorific of ice and salt will generally possess sufficient power; when greater is required, saltpetre or an ammoniacal salt may be added. Every systematic work on chemistry contains tables of frigorific mixtures, as well as instructions for making ice, which, when but a small quantity is required, may be thus artificially procured almost at as little expense as from the fishmonger.

A piece of ice the size of an orange, or weighing about a quarter of a pound, will be sufficient for most operations. It is put into a small canvass bag or a coarse cloth, and beaten, by the quickly repeated strokes of a mallet or flat iron, into a fine powder. As it is important that the powder should be fine, it is not ridiculously minute to state, that the bag should be turned in various directions during the pounding, and that the pounded ice, squeezed into a cake by the iron, should have its particles again separated by rubbing the bag between the hands. Instead of pounding it, the ice may be pulverized by the ice-plane.

The pounded ice having been placed on a large sheet of paper, any loosely-cohering particles may be separated by a paper-folder, and the unreduced large bits removed. Beside it, on the paper, about half the quantity of powdered common salt is placed, and they are then quickly and thoroughly mixed together, either by the ivory folder while on the paper, or by stirring them in a gutta percha or other non-conducting vessel. If the mixture be not quickly made, the extreme cold of one part of it may again freeze other parts into lumps.

The mixture is now put into the net (which may be conveniently supported and preserved from contact by placing it in the mouth of a jar crewer), and as soon as the action of the salt on the ice appears established by the dropping of the brine, it is ready for use.

In applying the net, the part which is to be benumbed should

be placed in as horizontal a position as possible; and it is well to raise the net for a moment every three or four seconds, in order to secure the equal application of the frigorific, and watch its effect. If the part be not horizontal, it may be necessary to hold the gauze bag containing the frigorific against it by the hand covered with a cloth; and if the net does not cover the whole of the surface to be benumbed, it must be passed to and fro over it. A moistened sponged placed lower than the net will absorb the fluid escaping from it, or this, on some occasions, may be allowed to drop into a basin placed underneath.

The procedure, as now described, may appear not only troublesome, but as requiring much time. The truth, however, is, that after one or two trials it is unlikely that any mistake will be committed, and the time occupied by the preparation of the mixture and its application should rarely exceed five minutes. So simple is the apparatus required, that, in cases of emergency, I have frequently procured everything but the ice at the house of the patient. The application of a solid brass ball which has been immersed in a freezing mixture, or a thin metallic spoon or tube containing this (with or without ice), is quite as easy.

The effects of this mode of applying intense cold are various, and their succession is as follows:—When a well-prepared frigorific mixture is brought in contact with the skin, a certain degree of numbness is immediately produced. The skin is rendered paler than natural, but there is hardly any disagreeable sensation produced, not even of cold. In about half a minute, the whole of the surface in contact with the frigorific becomes suddenly blanched, evidently in consequence of the constriction of its bloodvessels. This change is accompanied with a feeling of pricking or tingling, such as that produced by mustard. If the application be continued, a third effect is produced; the adipose matter under the skin is solidified, and the part becomes hard as well as white. The tingling is increased by this; but, unless in the most sensitive parts of the body, as the hand or lower part and front of the forearm, it is rarely noticed or complained of. Although this uneasy sensation soon subsides, there will, if the temperature of the part be not allowed gradually to return, and if the cold has reached the stage of congelation, be a renewal of it on the adipose matter again becoming fluid. This gradual return of the natural heat is ensured by placing a little powdered ice on the part, or a thin bladder containing ice and water.

The question how far the refrigeration should be allowed to proceed, or which of the three stages just described should be reached, has been answered differently by different operators. In many of the slighter operations, either of the first stages will be sufficient, and the measure just mentioned for effecting a gradual return of heat will then be unnecessary. If congelation of the fat is produced, and the operation is proceeded with before it returns to its fluid state (which is of advantage when it is important to prevent

bleeding), there may be required, as Mr. Paget has observed, a modification in the handling of the scalpel; not only, however, is there a certainty that the insensibility both in degree and continuance will be then sufficient, whether the incision is made before or after the fat again becomes fluid, but (what is of equal importance) that anti-phlogistic effect is secured, which prevents those consequences which so often prove fatal under common circumstances. On other points there have been great differences of opinion, though probably the results have not been so different as might have been expected. Dr. Wood, of Cincinnati, and M. Richard, of Paris, use frigorifics differing from each other in power, as much as 30 deg. F.; and Mr. Ward applies the frigorific for only one minute, while Dr. Hargrave applies it for five. Perhaps the longer congelation is continued (and it may be safely continued for double this period) the deeper and the longer continued the produced anæsthesia may be; but it were unreasonable to prolong an operation inconveniently in order that there shall be absolutely no feeling. In exhibiting chloroform the surgeon is not authorized to give a very large and very dangerous dose in order that the insensibility shall be absolute. But if it should appear that a certain continuance of congelation is necessary to ensure its antiphlogistic power, this would be a sufficient reason for always so continuing it.

As respects the credit of the two anæsthetics in the deeper operations, not their real character or merit, chloroform has this advantage over cold, that whereas, from the obscure expression of pain during the patient's unconsciousness from chloroform, and his forgetfulness of it afterwards, it is generally supposed that he suffers none; so, on the other hand, there may be greater complaint made in such operations under cold than is justified by the degree of pain felt, owing to the patient's disappointment (if the matter has not been explained to him beforehand) in experiencing any degree. It is certain that in the majority of operations, or those only involving the skin, the insensibility produced by cold is greater than that produced by the ordinary dose of chloroform; and on this account Dr. Wood thinks that it ought, in all suitable cases, to be preferred; but this is a small advantage compared with its perfect safety, and the power it possesses of preventing dangerous inflammation. To its superiority in these important respects must be added the facility with which it may be administered, the retention of the patient's consciousness, and the absence of his dread of sudden death, as well as of the sickness and headache that generally follow chloroform, the freedom from embarrassing hæmorrhage, and the assistance which the patient may give to the operator in assuming convenient postures, instead of its being necessary, as in using chloroform, to have an assistant to repress his involuntary movements and struggles.

A few words may be added, in conclusion, on certain misapprehensions that have existed in relation to the use of cold as an anæsthetic.

Dr. Wood states, that although congelation has, in most instances, fully answered his expectations, it has at other times disappointed them. If it be expected that the whole of the pain of a deep operation, as to the amputation of a limb, or the excision of a large tumour, is to be thus prevented, the expectation is unreasonable. Unless the frigorific were applied after, as well as before, the incision of the skin (and it often may be so with advantage), or unless it were employed of much greater strength, or for a longer time, than has been usual, and after measures have been taken to suspend the circulation through the part, this could not be effected; and the patient ought himself to decide whether, in such an operation, he shall endure the comparatively slight degree of pain caused by cutting the deeper parts, for the advantage of perfect safety, or undergo the risk of chloroform in order to have the benefit of that degree of insensibility (for it is seldom complete) which the ordinary dose of this substance is capable of producing. This risk might indeed be lessened were he to have such a moderate dose exhibited as is usually given in midwifery, after the severe pain from the cutaneous incision has been prevented by cold; and this would probably be adequate to the purpose; but as fatty degeneration or idiosyncrasy cannot be foretold, there is danger in every dose. A death from chloroform in midwifery was lately reported in an American journal; and in the nearly fatal case, occurring in France, alluded to in a precedidg note, the dose was small, and was intended, as in midwifery practice, to produce partial insensibility without suspending the consciousness.

Whether chloroform is used or not, I am confident congelation will soon be considered indispensable in every important operation, as a preventive of erysipelas and phlebitis. The fact ascertained by Dr. Eenwick and other statistical inquirers, that one-third of the amputations of the limbs prove fatal from inflammation, leaves no doubt on this point.

Others of Dr. Wood's failures can be differently accounted for. When the part to be operated upon is inflamed, or the circulation through it is vigorous, "a degree of cold only a little above the freezing point of water" is far from being sufficient. A frigorific of greater strength than 5 degs. below Zero (the strengh of ice and salt) may then be required, and it must be kept in contact with the skin until the desired effect is produced. There ought to be no failures in this respect, as there are in the use of chloroform. If the part be sufficiently refrigerated, insensibility of adequate degree and continuance is certainly produced.

It has been mentioned as a disadvantage of cold, that its application is painful. In parts which are naturally very sensitive, or have become so from disease, there may be considerable smarting when the third effect, or actual congelation, is suddenly produced; although even then what the patient feels is little when compared with the headache and sickness often caused by chloroform. Under these circumstances, congelation should be gradually pro-

duced; but, ordinarily, there is no occasion for graduation of temperature.

It is unnecessary to refer again to the notion, at first entertained by some, that the redness produced by congelation is symptomatic of inflammation. It arises from a state of the bloodvessels incompatible with inflammation. So far from causing this condition, there is little doubt that, however valuable intense cold may be as an anæsthetic, it is as an antiphlogistic that it will be chiefly prized, or as a means of preventing or immediately subduing, with perfect safety to the patient, every inflammation within its reach.—[*Medical Times.*

Water Strapping as a Surgical Appliance.—By C. Holthouse, Esq.

The object of the author of this paper was to direct the attention of the profession to the superiority of wet-strapping over ordinary diachylon plaster, in the treatment of ulcers and certain cutaneous affections of the extremities, as advocated by Mr. Chapman, and to recommend its adoption in injuries and disease of the joints, and in dressing stumps after amputation. The advantages of this application over plaster are:—1. Its innocuousness, being entirely free from the irritating effects of the latter, and never producing inflammation of the skin, or the eruption of pustules or vessicles. 2. The comfort the patient experiences from its application. 3. Its cleanliness. 4. The ease and quickness with which it is removed, from its not adhering to the hairs of the part. 5. Its cheapness. 6. It may be made the vehicle for the application of remedies.

The material made use of may consist of linen or calico, bleached, or unbleached; and the older it is, provided it be not rotten, the better it answers the purpose. It must be cut, or torn into strips of varying length and breadth, according to the part to which it has to be applied; the strips must be then immersed in water till thoroughly saturated, when they are fit for use. If the disease to be treated be an ulcer of the leg, the strips should be about two inches in breadth, and of a length exceeding somewhat the circumference of the limb; they should then be applied exactly in the same manner as plaster, each piece overlapping a portion of the one immediately below it; in fact, the directions given by Mr. Baynton for strapping the limb, may be strictly followed in the application of the water strapping, save and except that his directions to remove the hair from the part may be dispensed with; a roller must afterwards be applied in the ordinary manner.

Four cases in illustration of this method of treatment, and of its beneficial results, were then given; one being an ulcer of the leg of fourteen years' standing, that had resisted repeated attempts to heal at other hospitals; another, a case of eczema impetiginodes, affecting both lower extremities, and of three years and a half duration; a third was a case of a crushed thumb, followed by gangrene and subsequent amputation; and the fourth was an amputation of the thigh, for extensive disease of the knee-joint and upper third of the leg.—[*Lancet.*

EDITORIAL AND MISCELLANEOUS.

Our Journal for 1855.—By reference to the Publisher's prospectus upon the cover of this number, it will be seen that by increasing the dimensions of the page, this volume will contain at least one hundred and twenty pages more of printed matter than any of its predecessors. It will also be perceived that the valuable assistance of Dr. Henry Rossignol has been secured for its future editorial supervision. These changes have been made as an ernest of increased usefulness in return for increased patronage. The character of the Journal will continue to be essentially *practical;* eschewing theoretical disquisitions as much as possible, avoiding personal controversies, rejecting anonymous communications, and always giving the preference to *American* over *European* contributions of equal merit. We do not mean to undervalue foreign medical literature; but we do mean to foster our own to the utmost of our ability. Some of our contemporaries seem to have a decided predilection for exotics, and contain scarcely an allusion to anything of indigenous origin, while their pages are filled with foreign matter. We will endeavor not to err in the opposite extreme.—[Sr. Ed.

BIBLIOGRAPHICAL.

A Practical Treatise on Foreign Bodies in the Air-passages. By S. D. Gross, M. D., Professor of Surgery in the University of Louisville, &c., &c., with illustrations. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 468. (For sale by McKinne & Hall. Price $2.50.)

The work before us is, we believe, the only complete Treatise in our language, upon the subject of which it treats, and it bears the impress of its learned author's judicious and practical mind. It contains an extensive collation of facts, with appropriate deductions therefrom, which impart to it the high value of a clinical monograph. Regarding this work as one of the most valuable contributions to American Surgical literature, and desiring to convey to our readers some idea of its scope, we beg leave to offer the following general summary in the author's own language:

"From the numerous facts and cases adduced in the preceding pages, and from the reasoning founded upon them, the following conclusions may be fairly and legitimately deduced. These conclusions may be arranged under different heads, according to their respective relations, as diagnostic, pathological, therapeutic and operative.

I. *Diagnostic Signs.*—Under this division of the subject may be briefly mentioned the nature and mode of entrance of foreign bodies, their liability to be arrested in different portions of the air-passages, and the symptoms commonly induced by their presence.

1. Any substance, whatever may be its form, provided it be not disproportionably large, may enter the larynx, and thence descend into the trachea and bronchial tubes.

2. The entrance of the foreign body is usually effected during a strong

and sudden inspiration, while the epiglottis is off its guard, the glottis expanded, and the larynx quiescent.

3. The extraneous substance may be arrested in any portion of the air-passages, but not with equal frequency. Thus, in the larynx, it is, perhaps, most liable to be entrapped in the ventricles of Morgagni; and, when it descends into the bronchial tubes, it more frequently selects the right than the left. The trachea, on the contrary, rarely becomes its permanent receptacle; and the same is true in respect to the binary and tertiary divisions of the bronchial tubes.

4. The site of the foreign body is materially influenced, not generally, but frequently, by its size, weight, and configuration. Thus, a shot, ball, pea, bead, or pebble will be more likely to descend into the bronchial tubes than a rough, light, sharp, or angular substance.

5. The intruder may shift its place. Thus, it may pass from one bronchial tube into the other, or from these canals into the trachea, or from the trachea into the larynx, in a direction contrary to that of its entrance. On the other hand, it may be firmly impacted, either in its first situation, or in some secondary one.

6. The immediate and invariable effect of the entrance of a foreign body into the air-passages is a violent, spasmodic, and irresistible cough, with dyspnœa, and a sense of impending suffocation. The countenance is frequently livid, and the patient sometimes falls down in a state of insensibility.

7. The violence of the first symptoms continues from a few minutes to a quarter of an hour, half an hour, or even longer, when it is succeeded by a calm, variable in duration, and again followed by cough and difficulty of breathing, very much as in the first instance.

8. When the extraneous substance is arrested in the larynx, there will generally be more or less change in the voice, sometimes, indeed, total aphonia, hoarseness, and croupy cough, with diminished respiratory murmur in both lungs. The latter symptom will be most conspicuous when the body is so large as to impede materially the ingress of the air.

9. When the foreign body plays up and down the windpipe, as it often does when it is light and small, it always excites violent coughing and suffocative symptoms, very similar to those produced at the moment of its entrance. Under such circumstances, the patient can frequently feel the extraneous substance as it impinges against the trachea and the larynx. It is not so certain, however, as some have alleged, that the surgeon can hear and feel it by the application of the ear and fingers to the windpipe. Such an occurrence, at all events, must be very unfrequent.

10. A bulky body, relatively considered, may entirely fill the bronchial tube into which it may happen to fall, and thus give rise to complete collapse of the corresponding lung, as occurred in one of my own cases. A thin, flat body, as a coin, may produce the same effect, by acting as a sort of valve. In general, however, more or less air will pass by the side of it, thereby enabling the respiration to go on, although much more feebly than in the normal state. In both cases, the walls of the chest, on percussion, will emit a clear sound. The respiration in the opposite lung, after the first few days, will generally be puerile.

11. The site of the foreign body is occasionally, but not generally, indicated by a fixed pain, soreness, or sense of uneasiness in the larynx, trachea, or bronchial tubes.

12. The expectoration may be simply mucous, or it may be tinged with blood, or mixed with pus, especially in chronic cases, in which there is also occasionally hæmoptysis.

13. In attempting to establish the diagnosis of a foreign body in the air-passages, the practitioner must take into account, first, the history of the case; secondly, he must carefully examine the condition of the respiratory organs, considering fully the rational and physical signs; and, thirdly, he must bear in mind the fact that the foreign body is liable to change its situation, thereby inducing corresponding alterations in the symptoms.

II. *Pathological Effects.*—These effects are primary and secondary; the former relating to what takes place immediately after the occurrence of the accident, and the latter to the organic alterations induced in the respiratory apparatus in consequence of the protracted retention of the foreign body.

1. The extraneous substance may destroy life at the moment of its introduction, or death may be induced at a variable period afterwards. In either case, the fatal effect may be produced by spasm of the larynx, or by mere mechanical occlusion.

2. The foreign body may be expelled immediately after its entrance, in a violent paroxysm of coughing, or it may be expelled subsequently either before or after it has induced serious structural lesion in the air-passages.

3. No patient is safe so long as the extraneous substance remains in the windpipe, whether in the laryngeal, tracheal, or bronchial portion, inasmuch as he may perish at any moment from suffocation, or, at a more or less remote period, from inflammation.

4. The danger from suffocation, when the patient escapes from the first effects of the accident, is generally greatest, all other things being equal, when the foreign body plays up and down the windpipe. If impacted, it may lead to the same result by becoming accidentally detached; but in such a case it will be more likely to destroy life through inflammatory action.

5. A foreign substance is occasionally comparatively harmless, as when, for example, it lies in one of the ventricles of the larynx; but, generally, it causes serious structural mischief.

6. The danger of severe and fatal inflammation is greater when the substance is lodged in the bronchial tubes than when it is arrested in the larynx or the trachea.

7. Violent and even destructive disease may be induced in the lungs, bronchial tubes, and pleura when the foreign body is situated in the larynx.

8. The most common structural lesion in cases in which the extraneous substance is retained for any length of time, are inflammation, abscess, and tubercles of the lungs, inflammation of the pleura, with effusion of serum and lymph, or sero-purulent matter. In rare instances there is marked alteration in the conformation of the chest, as happened in one of my own patients.

III. *Therapeutic and Operative Considerations.*—Under this head may be mentioned, aphoristically, the use of emetics, sternutatories, and other remedies, as expellents of foreign bodies; the importance of early recourse to bronchotomy, with the manner of performing the operation; and the various circumstances which should regulate the after-treatment.

1. Although foreign bodies have occasionally been ejected from the windpipe, under the influence of emetics, errhines, and other means, the number of such cases is too small to justify the practitioner, under any circumstances, in confiding in these different classes of remedies. Generally, indeed, their effect is to increase the respiratory suffering and the danger of the patient, by impelling the intruder against the larynx, where its presence always excites spasm and other unpleasant symptoms.

2. The remarks just made in reference to the use of emetics, sternutato-

ries, and other means, are equally applicable to all spontaneous efforts at expulsion, whether they occur in the form of coughing, violent respiratory action, sneezing, vomiting, or dreaming; because, although these efforts are sometimes successful, yet they are more generally unavailing, if not positively hurtful, and even destructive to the patient.

3. Inversion and succussion of the body, with or without beating of the chest, are generally hazardous proceedings, unless preceded by an opening in the windpipe; for the reason that the offending substance, if it be forced out of its lurking place into the larynx, or even against this portion of the tube, is inevitably followed by violent coughing and suffocative symptoms; thus greatly endangering the safety of the patient. The only case in which they ought to be practised, is where the foreign body is a shot, bullet, or similar substance.

4. Inasmuch, then, as no confidence is to be placed in the use of emetics, errhines, and other means, inversion and succussion of the body, and not even in nature's own efforts; and inasmuch, moreover, as no patient can be considered as being safe so long as the extraneous substance remains in the air-passages, it follows, as a necessary corollary, that bronchotomy affords the best chance of relief, and that, consequently, it should always be resorted to as early as possible, unless there is some special contraindication; as, for example, serious organic disease of the respiratory organs. The great danger in this accident is spasm of the glottis, which nearly always promptly disappears the moment the artificial opening has been effected.

5. In children, and in young or timid persons, the operation should always be preceded and accompanied by the administration of chloroform, which, while it perfectly calms the patient, greatly facilitates the extrusion of the foreign body, by rendering the respiratory organs tranquil and passive.

6. Laryngotomy is always comparatively easy of execution, and should, therefore, always be selected when there is a positive certainty that the intruder is lodged in the larynx. In all other cases, and also where the patient is very young and the neck very short, tracheotomy, although, in general, a very difficult procedure, should be preferred. Laryngo-tracheotomy is rarely necessary or proper, except in cases where the ordinary operations are found to be inadequate.

7. The windpipe, as a general rule, should never be opened before there is a cessation of hemorrhage, lest the blood, by falling into the tube, should embarrass the operator, if not seriously compromise the safety of the patient.

8. The opening, both in laryngotomy and in tracheotomy, but especially the latter, is generally too small to admit of the ready escape of the offending substance. To answer the purpose effectually, and this is one of the great objects of the operation, it should be at least one inch and a quarter in the adult, and not less than one inch in the child.

9. There is no necessity, in any case, for the removal of an elliptical portion of the trachea, inasmuch as the retraction of the edges of the wound by means of hooks will generally afford ample space for the ejection of the foreign body and the introduction of instruments. In laryngotomy, a crucial incission may sometimes be advantageously made into the crico-thyroid membrane.

10. Under no circumstances should bronchotomy be performed without a thorough axploration of the chest and œsophagus. It should be remembered that mere spasm of the glottis caused by the lodgement of a foreign

body in the fauces or gullet, or by derangement of the digestive, respiratory, and nervous functions, may induce a train of phenomena, closely resembling those occasioned by the presence of a foreign body in the air-tubes.

11. Bronchotomy is generally inadmissible when there is serious organic disease of the lungs, attended with marasmus and all the ordinary symptoms of pulmonary phthisis.

12. The foreign body, both in laryngotomy and tracheotomy, may escape either at the artificial opening, or by the glottis. In either case, it may be thrown to a considerable distance, perhaps the very moment the tube is pierced; or it may be intercepted by the edges of the wound; or it may, if it take the natural route, lodge in the mouth, or pass into the stomach.

13. Should the foreign substance not be ejected, or appear at the artificial orifice within a few minutes after the tube has been pierced, search should be made for it with the forceps, or hook, with a view to its extraction; but all such attempts should be made in the most gentle manner, nor should they be prolonged beyond a few seconds at a time; inasmuch as they almost invariably excite violent coughing and suffocative feelings. The use of chloroform will greatly facilitate this step of the procedure.

14. A much better plan than searching for the foreign substance, at least in the first instance, is to invert the patient's body, and to strike the chest with the hand, or with a pillow. This procedure should be tried in all cases of balls, shot, peas, beans, water-melon seeds, plum-stones, cherry-stones, button-moulds, and other similar articles. Inversion of the body, with previous opening of the tube, is a comparatively safe operation. Succussion and percussion are important auxiliaries in such a case.

15. When the extraneous body refuses to escape, or resists our efforts at removal, the edges of the tracheal wound should be kept apart by means of blunt hooks, in order to favor extrusion. The outer wound should be covered, in this case, with a piece of gauze, arranged in the form of a bag, to prevent the ingress of flies and dirt.

16. Riddance having been effected, the wound is closed with adhesive strips, aided, if necessary, by a few interrupted sutures, care being taken not to carry them through the substance of the trachea. Simple water-dressing is the best application, but even this may, in general, be dispensed with.

17. The after-treatment must be strictly antiphlogistic; the respiratory organs be diligently watched; and the air of the patient's apartment must be maintained, throughout, at a uniform temperature, that is, at from 65° to 68° of Fahrenheit. It should be remembered that no patient is safe or out of danger, after this accident, so long as there is inflammation of the respiratory organs, whether the intruder has been expelled or not.

18. Finally, it may be necessary to perform bronchotomy a second or even a third time. The same circumstances which induce us to perform it once may compel us to perform it again, at a more or less remote period, upon the same individual.

A Manual of Pathological Anatomy. By C. H. Jones, M. B., F. R. S., &c., &c., and Edw. H. Sieveking, M. D., F. R. C. P., &c., &c. 1st American edition, revised, with 397 illustrations. Philadelphia: Blanchard & Lea. 1854. 8vo., pp. 735. (For Sale by McKinne & Hall. Price $3.50.)

The advances of Pathological Anatomy are so rapid, especially since the extended application of Microscopy to the study of morbid textures, that new works upon the subject become necessary to whoever would keep pace

with them. The work before us appears to have been faithfully drawn up and is remarkably well adapted to students. The numerous and well executed illustrations must very materially facilitate its comprehension, and lend to the study an interest which none can appreciate so well as those who have not enjoyed these facilities.

An Inquiry into the Pathological Importance of Ulceration of the Os Uteri. Being the Croonian Lectures for the year 1854. By CHARLES WEST, M. D., F. R. C. P., &c., &c. Philadelphia: Blanchard & Lea. 1854. 8vo., pp. 88. (For sale by McKinne & Hall. Price, $1.)

Every medical reader is aware of the discussions to which the lesions of the os uteri have given rise in the learned bodies of Europe during the last few years. With Bennett on one side and men equally eminent on the other, the importance of these lesions has been very variously estimated, and practitioners have been found at the two extremes of exaggeration and depreciation. The object of the author of this work, is a candid inquiry into the subject. It should therefore be attentively read, and we feel assured that none will rise from its perusal without much practical advantage. It is only by examining the arguments upon both sides of this mooted question that the truth can be ascertained.

Positive Medical Agents: being a treatise on the new Alkaloid, Resinoid, and concentrated preparations of Indigenous and Foreign medical plants. By authority of the American Chemical Institute. New York: B. Keith & Co. 1854. 8vo., pp. 300.

We are indebted to the publishers for the above-mentioned work, anonymous, yet issued "by authority of the American Chemical Institute," a body of whose existence we had not before been apprized. We find at the close of the work the following advertisement, which will throw some light upon the object of the book and the end for which the "Institute" was established:

"American Chemical Institute.—The preparation of the active and concentrated medicinal principles of indigenous and foreign medical plants, in a pure and reliable form, is the object entertained by the *proprietors* of the above institution. B. Keith & Co., 582 Houston street, New York, are prepared to fill all orders on the best terms. They are engaged in the extensive manufacture of all the agents described in this work, and which are warranted pure in all cases," &c., &c.

The work before us is then nothing more than an ingenious device for bringing before the profession the important fact that B. Keith & Co. are prepared to fill all orders, &c. We would be doing injustice to the author, however, were we not to acknowledge that he exhibits no small amount of artistic skill in the manner in which he has spun his yarn of 300 octavo pages. His general considerations, covering 90 pages, interspersed with Physiological, Psycological, Political, Philanthropic and Christian principles, show him to be quite an adept in other matters as well as in the prepa-

ration of Alkaloids and Resinoids. The book then gives us an account of the physical and medicinal properties of the following concentrated articles: Geranin, Hydrastin, Hydrastine, Apocynin, Gelsemin, Caulophyllin, Capsicin, Asceepin, Cypripedin, Eupatorin, Rhusin, Myricin, Helonin, Podophyllin, Lobelin, Sanguinarin, Leptandrin, Euonymin, Irisin, Rumin, Alnuin, ol. Erigeron, Senecin, Phytolacin, Scuttellarin, Jalapin, Stillingen, Xanthoxylin, Veratrin, Cornin, Viburin, Hyosciamin, Lupulin, and Prunin!!! But, we repeat, the gist of the work is found at the end of the book, as above quoted.

Report of the Select Committee of the Senate of the United States on the Sickness and Mortality on board Emigrant Ships. 1854. pp. 147.

We thank the author for this very interesting Report, drawn up by Mr. Hamilton Fish and accompanied with communications from distinguished gentlemen from different parts of the country. It is full of facts and valuable suggestions, which will, we trust, lead to enlightened legislation upon the important subject in question.

Deaths from Chloroform.—A man, 29 years of age, was recently submitted to the influence of chloroform, in University College Hospital, London, for catheterism, rendered necessary by retention of urine. He died, however, before the operation was commenced, notwithstanding the best endeavors of Prof. Erichsen to stay the fatal effects. Another case is reported by Prof. Dumreicher, of Vienna, the subject being a youth 19 years of age.

Quinine in Croup.—Dr. J. Macfarlan reports, in the New York Journal of Medicine, for November, several cases in which he succeeded admirably in relieving croup by the use of quinine, although some of them were very violent.

Asylum for Inebriates.—We are happy to see that a serious effort is being made in the State of New York to establish an asylum for the treatment of confirmed drunkards. There can be no good reason why such institutions should not be eminently beneficial.

A case of Quadruple Birth.—Dr. S. Kennerly, of Virginia, reports in the "Stethoscope" a case of labor which resulted in the delivery of four children—3 boys and 1 girl—all alive, but neither lived more than fifteen minutes. They were seven months children and weighed in the aggregate about 8 pounds. "There were two distinct placentas; one was very large and divided into three distinct lobes, each lobe having its respective cord attached to its centre. The smaller placenta was a little larger than either lobe of the larger placenta." The mother recovered without accident.

Twins born at 40 days interval.—We find in the French Journals, the following case: A country woman, aged 25, in good health; menstruation

regular; primipara; gave birth to a well developed, though rather delicate child, which died eight days after birth, from a cold. The placenta came away naturally one hour after the child. The subsidence of the abdomen was incomplete; active movements continued to be felt by the mother; there was neither secretion of the lochia nor milk. Nothing otherwise particular occurred in the condition of the woman until 40 days after the birth of the first child, when another was born, also feeble, but completely developed. It was only at this time the lochia and milk appeared.

Superfatation.—Dr. Thielmann relates the following case of superfœtation. A peasant woman, aged 25, had borne, at 20 and 23, girls. In July, 1852, she became pregnant the third time: menstruation appeared twice after conception. On the 26th March, 1853, the first pains appeared, and next morning she was delivered of a girl, small but living; the after-birth came away normally. The lochia ceased in a few hours. The secretion of milk was so scanty, that the child could not be supported by it. Eight days after delivery, the woman returned to her household duties; but she felt in her left side the movements of a second child. On the 18th May—that is, fifty-two days after the birth of the first child—pains came on, and the birth of a second living girl, somewhat smaller, followed. From this time the secretion of milk went on so freely, that both children derived sufficient nourishment. M. Thielmann says this case was officially certified.—[*Medico-Chirurg. Review.*

Bile rarely found in the fæces of persons in health.—According to the researches of Dr. Wehsary, Pettenkofer's test for bile acids gave only once a positive result. Nitric acid added to the fresh fæces gave only twice an undoubted reaction of bile. He concludes therefore, that as a rule, undestroyed bile is not found in fæces.

Fæces in pathological conditions.—The following are some of the results of Ihring's investigations, as stated in the British and Foreign Medico-Chirurgical Review:

Ihring has investigated the condition of the fæces in pathological conditions. After taking one ounce of rock-salt, a loose acid stool was passed which contained 20·8 per cent. of solid constituents, and among these were 6·6 per cent of rock-salt. There was no sulphuric acid or bile ingredients. A large portion of the rock-salt passed off by the urine.

Two loose stools, passed by a patient with tuberculosis of the intestines, had the following composition:

Æther extract	11·8		9·5
Alcohol extract	28·2		35·9
Water extract	43·9		63·7
Insoluble salts	5·8	Chlorine	7·3
Chloride of sodium	9·0	Phosphoric acid	4·8
		Albumen	8·4

The stool of an hysterical patient contained a large quantity of gas, consisting of sulphuretted hydrogen and carbonic acid: the stool contained, also, albumen, and presented under the microscope many vegetable cells and muscular fibrillæ.

Some other analyses of a similar kind are given, and then the following conclusions are drawn from all the observations:

The stools may become changed both as to quantity and quality. In diarrhœa, the water is increased, and compared to the water, the solids are diminished, but the absolute amount of solids excreted is increased. The quantity of undigested food is greater than natural. The alcohol-extract, which includes the biliary constituents, is increased; the water extract and the salts are always increased; the earthy phosphates, and especially the magnesia-salts, are always increased. Sulphuric acid is present in bilious diarrhœa; iron is present when purgatives have been given, and always when iron has been taken as medicine. Albumen is not present during purgation by medicine in healthy individuals, but is present in intestinal tuberculosis, in typhus, cholera, and dysentery.

Quite a Discovery.—Dr. W. B. Powell announces in the Boston Medical and Surgical Journal, "a discovery of the means of determining the comparative length or duration of human life, and other important physiological facts." Hear him!

"Extend a line, as suggested by Mr. Cox, from the external occipital protuberance to the most prominent part of the external orbitar process of the os frontis, and the extent of the space that is found to obtain between the line and the meatus auditorius externus, will accurately indicate the comparitive duration of life. From observation I would name an inch, at the meridian of life, to indicate an existence of 80, 90 or an 100 years, depending upon the density of the organization. The average, to the best of my observation, is about half an inch, which may be regarded as corresponding pretty accurately with the known average of human life, in this country, after deducting the mortality occasioned by mechanical and chemical causes. Under the latter I include medical mal-practice.

The first head I measured with a view to the discovery, was that of an old man who died of phthisis, and the space between the line and the meatus was but the sixteenth of an inch. The next one I selected was that of a man who had been executed, and the space was one inch and an eighth. In this way I ran through my cabinet of crania, consisting of several hundred, and found nothing but confirmation of the principle here set forth. I then commenced testing the law in society, and some of those who possessed a space of only a fourth of an inch have since died. In fine, I have discovered no exception to the rule.

From what has been stated, it follows that a descending developement of the cerebellum and of the middle lobes of the cerebrum secures a corresponding duration of life—power to resist the usual causes of disease, and when assailed, to re-act and recover. We can now understand what is really meant by the common phrase a good constitution, such as we have illustrated by our octogenarians, who may be of a full habit and in their usual enjoyments of the good things of the world, or they may be lean and shriveled and satisfied with a crust of bread and a glass of water. I desire that it shall not be supposed that I assign both vigor and tenacity to the same cerebral convolutions; on the contrary, I regard the two functions as being independent of each other, and as depending upon seperate convolutions, that of tenacity being the inferior."

Another of the Doctor's discoveries is thus stated:

"I have been frequently asked—do the vital forces decrease in old age?

I answer affirmatively, more especially the animal; and I know of but one that does not, and it is the respiratory. During many years, I was unable to assign any reason why consumptives, the phthisically constituted and old people, should have the medulla oblongata larger than is common to other people. The fact, to the extent of my reading, has not been noticed by any one else. As the forces auxiliary to respiration decline, that upon which it directly depends increase. I refer the inquisitive to the foramen magnum of the crania of those above designated."

Influence of the Poison of the Northern Rattlesnake—(Crotalus Durissus)—on Plants..* By J. H. Salisbury, M. D.—It is a curious and well known fact, that some of our most deadly poisons are animal secretions, and that the very animals—the very tissues which secrete these powerful proximate organic principles, are as susceptible to their deleterious influence, when introduced into their circulation, as the tissues of the most harmless animal would be under similar circumstances. It is also well known that many vegetable products are highly poisonous to animals. But the influence of animal and vegetable poisons upon plants, has—although a subject scarcely less interesting in a physiological point of view—excited but little attention. The simplicity of the plant's structure, renders the field one of peculiar interest, in the way of studying the general action of medicinal agents and poisons upon organized tissues.

On the 18th of June, 1851, a large female rattlesnake, which had been caged in the N. Y. State Cabinet of Natural History, for about a year, without food, died. On dissection, its stomach and intestinal canal were found entirely empty. The sac into which the poison is emptied was laid open, and the virulent matter (of which there was little), carefully removed and placed in a porcelain capsule. About fifteen minutes after its removal, four young shoots of the lilac—*Syringa Vulgaris*, a small horse-chestnut of one year's growth—*Asculus Hippocastamum*, a corn plant—*Zea Maize*, a sunflower plant—*Helianthus Annuus*, and a wild cucumber vine, were severally vaccinated with it. The vaccination was performed by dipping the point of a pen-knife into the poisonous matter and then inserting it into the plant just beneath the inner bark. No visible effect, in either case, of the influence of the poison was perceptible till about sixty hours after it had been inserted. Soon after this the leaves above the wound, in each case, began to wilt. The bark in the vicinity of the incision exhibited scarcely a preceptible change; in fact it would have been difficult to have found the points, if they had not been marked when the poison was inserted. Ninety-six hours after the operation, nearly all the leaf-blades, in each of the plants, above the wounded part were wilted, and apparently quite dead. On the fifth day the petioles and bark above the incisions began to lose their freshness; and on the sixth, they were considerably withered. On the seventh day they appeared about as they did on the sixth. On the tenth, they began to show slight signs of recovery. On the fifteenth, new but sickly appearing leaves began to show themselves on the lilacs, and the other plants began to show slight signs of recovery in the same way. Neither of the plants were entirely deprived of life.

It was interesing to mark the progressive influence of the poison. The

* The principal facts in this article were formerly published in the Trans. of Amer. Scientif. Assoc., but as through this medium they have obtained a limited circulation, especially among medical men, I desire to bring them more directly before the profession by publication in a medical periodical.

first indication of the derangement of the healthy functions of the plants was observed in the leaves: these began to wilt and die at their edges and apices; and this death gradually and uniformly advanced on all sides towards the midrib and petiole, till the whole or nearly the entire leaf-blade was destroyed.

It is an interesting fact in physiology, that the plants first exhibited signs of death in the leaves; and still more interesting, that this death commenced first in the leaves, on the side of the plant, in which the poison was inserted.*

The facts materially deducible from these experiments are:—

1. That the effects of the poison of the rattlesnake upon plants and animals, when introduced into their circulation, by a wound, are similar.†

2. That it requires a much longer time for it to affect the plant, than the animal.‡

3. That the effects were invariably exhibited on the parts above the wound, and in no case affected the leaves below it.‖

4. That it invariably affected first the leaves on the side of the plant in which the incision was made.

5. That its influences were first rendered visible on the edges and apices of the leaf-blades.—[*N. Y. Journal of Medicine.*

Poisoning by the external application of Arsenic.—A French peasant who had had chronic ulcer on his face for fifteen years, was persuaded by a carpenter to allow him to undertake the cure thereof. A plaster was applied, and on the same day the patient experienced general indisposition; on the following day severe headache, and vomiting and purging manifested themselves; after four days of acute suffering, the patient died. Chemical analysis proved the presence of arsenic. The carpenter was sentenced to three months' imprisonment.—[*Journal de Chimie. Br. and For. Medico-Chirurg. Review.*

Croup. Tracheotomy.—M. Guersant (L'Union, 3 Juillet) gives the statistics of tracheotomy in croup at the Hopital des Enfans Malades. Up to 1850 the mean numbers of operations were ten (annually); in 1851, there were twenty-five; in 1852, there were thirty; and in 1853 there were sixty. Of 161 children operated on, thirty-six were saved, or one in five, and Guersant believes that this fortunate result would have been still more marked, had the operations been performed earlier in the disease than was generally the case.

Dr. Archambault (L'Union, 8 Juillet) relates two cases of croup, arrived at the last stage, in both of which the operation was completely successful.

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* This shows a less perfect system of Anastomosing vessels than exists in the animal.

† It is stated on good authority, that the poison of the snake can be taken into the stomach of the animal with impunity: its dangerous effects being only exhibited when introduced into the circulation by a wound. It would be interesting to note its influence on the animal when applied externally, to the skin, to see whether its deadly effects would be modified by the absorbents.

‡ It should be stated, in order to show that animals were readily affected by the poison of the snake, that a short time previous to its death, a rat bitten by it died in two hours.

‖ This was probably owing to the small quantity of poison inserted in each case.

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ORIGINAL AND ECLECTIC.

ARTICLE III.

Remarks on Dysentery. By C. C. HOWARD, M. D., of Lowndesboro', Alabama.

Although in almost every systematic work on the practice of physic, and often in our periodical journals, we may find a chapter on dysentery; yet, the subject being an eminently practical one, some farther remarks may be thought not unworthy an insertion in your valuable Journal.

It is said, that "inspection of the dead body discloses more or less ulceration, chiefly of the large intestines. The glands that are scattered over its surface are enlarged and prominent. The lining membrane is here and there thickened. The last three or four inches of the ileum, are generally studded with superficial ulcerations. The omentum, mesentery and glands are often found, the first united to the neighboring parts, the latter enlarged," &c.

Having made no post mortem examinations of this disease, these are facts to which I cannot directly testify. But I entertain not the shadow of a doubt that they are facts nevertheless, and that they are the results of a previous inflammatory action in those parts. I come, therefore, confidently to offer some practical remarks on an inflammatory disease of the mucous membrane of the large intestines—with or without like disease of other portions of the alimentary canal.

The results of the inflammatory action in the fatal cases, it seems, are not the same in each, especially as to locality, and when

we take all the cases, from the mildest to the gravest, we must conclude, that the extent of actual disease is very variable. All that I know of this affection, as already indicated, is that learned from the books and at the *bedside.* But, if the post-mortem examinations of others satisfy me, as they do, that the disease is not necessarily confined to one particular part of the intestines; observation at the bedside, has entirely convinced me that, in one case, the inflammatory action is almost confined to the lining of the rectum or descending colon; in another, to that of the cœcum and ascending colon, or the last few inches of the ileum; yet another, to modifications of these, and lastly, to the greater part of the alimentary canal.

Where a disease is thus modified, we should, of course, expect a corresponding modification of symptoms; but, when an inflammation affects the same membrane in the same organ or apparatus, though at different points and to different degrees, we should also expect *some agreement* of symptoms. The characteristic symptoms of dysentery, whether mild or grave, are very correctly stated by Dr. Watson, in the second paragraph of his seventy-third lecture, viz: "griping pains in the abdomen, followed by frequent mucus or bloody stools, straining and tenesmus. * * * The acute form or stage of the disease is attended with fever." The disease, perhaps, never exists without these symptoms being present; but there is a wide range of modification of them, and thus modified, they serve as good indices to the locality and extent of the disease in individual cases.

It will be found, that in inflammation of the mucous tissue, whether in the intestines, the urinary bladder, the bronchia or elsewhere, a quantity of mucus, with or without blood, is almost invariably poured out; and this is a law of such tissue. It may be remarked, then, that although the quantity may be small, owing to the grade or extent of the inflammation, there is *always* more or less with or without blood. And as many substances are received through the mouth, and find their way into the bowels, and other secretions beside mucus are poured into the canal, the discharges are often found to be mixed, and composed of these different secretions. Those cases in which the rectum is the chief seat of disease, pour out a much smaller quantity of mucus than when the greater part of the colon is involved. But, whilst there may be little secretion, and, it may be added, less tormina or fever, the tenesmus is almost constant; and we sometimes see cases, whether

the pathology indicated be correct or not, in which the patient, for whole days together, has been constantly employed in getting to and from the chamber-pot; generally discharging a teaspoonful of mucous, though frequently a few drops only, or none at all: yet, at the expiration of two or three days, a reasonable allowance for the fatigue from so frequently getting up and down, will satisfactorily account for the difference in his feelings or general symptoms. Where, too, the chief disease is in the last few inches of the ileum, the evacuations will usually be small, or if large, watery; but the other symptoms will be graver, thus, fulness, and upon pressure pain and gurgling in the right ilia; fever of a low grade. Lastly, when the disease involves *most* of the colon, the secreting surface being great, it is reasonable that the amount of mucous should be great also—so that in such cases, the discharges are often sufficiently copious to very much reduce the patient's strength in a few days.

In remarking on the discharges, incidental reference has been made to the other characteristic symptoms. But it should be more directly stated that the tormina is no less variable than the other i. e., the discharges; and in some of the most serious cases it is by no means prominent. The latter, are those in which the chief seat of the disease is in the last few inches of the ileum;—cases in which the dysenteric symptoms are sufficiently distinct, but not urgent, and, if we could remove those characteristic symptoms without entirely removing the disease, no man accustomed to seeing "*typhoid fever*" would hesitate to pronounce it such a case.

Tormina is a prominent symptom where the colon is *extensively* involved, and still more prominent, when the greater part of the entire canal is implicated; or cases in which a green, blue, black, or *prairie-mud-like liquid* is poured into it; accompanied by extreme nausea, and ejected through the mouth and anus most forcibly.

It may be said, in relation to the tenesmus, that it is a symptom dependent on the rectum, and whether there be inflammatory action there from the beginning, or the irritation of the liquids passing over and exciting it to extraordinary action produce it, where the tenesmus is obstinate and persisting, local disease of the part is to be very much suspected. Intimately associated with this symptom, is the dull, heavy pains, about the pelvis, and often extending to the thighs.

Having noticed the discharges, the tormina and tenesmus; the

fever accompanying this disease claims attention for a moment. The division of fever into grades, I regard as being very proper and useful; and to this remark it is only necessary to add, that in dysentery, sometimes we find the synochal grade; then the typhoid; then the intermediate; again, even modifications of these; and lastly, and not unfrequently, there is *extremely little* febrile action of any sort. So also, the fever continues, remits or intermits as the case may be.

When one organ or part suffers, the other organs, or some of them, sympathize with the diseased one. This law of man's being is so universally recognized, that all would expect, as we shall find, that with parts having so extensive connections as those involved in dysentery, there will generally be a great deal of sympathy; while, indeed, we could scarcely mention any important organ that does not at times sympatize with the inflamed membrane, it is only necessary to name the liver, kidneys, urinary bladder, skin and stomach. That the liver, in the amount and character of its secretion, soon manifests its sympathy with the inflamed membrane, every one knows; but, that its deviations in this respect are often, if ever, the exciting cause of dysentery, I by no means believe. I can readily conceive that the chief causes of dysentery might directly affect the liver, and my first impressions in the study of physic were with that opinion: but so many cases occur in which the functional deviations of this organ are so late in making their appearance in the disease, I am satisfied that ordinarily, there is no more connection between this glaud and the inflamed membrane, than between the kidneys and it. Indeed, these latter organs, by their diminished, and highly colored and probably concentrated secretion, usually manifest the *earlier* sympathy. The urinary bladder, either directly or from the irritation of this concentrated urine, not unfrequently performs its office reluctantly, and in the most cases strangury often appears comparatively early. The skin is often dry and preturnaturally hot; though, in many of those cases in which the accompanying fever is of a low grade, it is, particularly of the extremities, cool, and sometimes *cold*, moistened with a clammy offensive sweat; nausea and vomiting are not confined to those cases heretofore spoken of, in which the stomach is almost certain early to become involved in actual disease, but occurs under a variety of circumstances. Thirst, though often slight or entirely absent in the commencement of the attack, usually increases very much as the disease progresses.

As yet, no reference has been had to the tongue, as an index in this disease; and it is scarcely necessary to say, that in the commencement it is somewhat furred, white or yellow; having no more color than is natural to it; but, in the progress of the disease becoming red at the tip and edges, with a dry brown crust in the middle, which crust finally being thrown off, leaves the entire member very red and often glazed. From the commencement, to treat a case of dysentery, to the close, I never fail to frequently examine this organ; and making very little allowance even for opium or its preparations; almost every remedial agent that very decidedly makes the tongue drier will do no good, and when the prescription has that effect, to say the least, the question of the propriety of changing it ought to be considered.

Of the causes of the disease, it may be proper merely to give an opinion, and it is this, that they are almost entirely atmospheric; the simpler and more purely inflammatory being dependent upon changes in temperature, or perhaps continuance of somewhat elevated temperature, with a certain degree of moisture. Those of a low or typhoid grade not only upon such changes, but also changes in the constituents of the atmosphere. That filth about small negro houses, with decay of the sappy logs of which they are sometimes constructed, together with certain ingesta; and I mention particularly the continued and almost sole use of *molasses*, *beef* and corn bread; are decided modifiers of the atmospheric influences, I do not at all doubt.

Having made these remarks upon the nature, symptoms and cause of the disease, and passing over the points of diagnosis and prognosis, we come lastly to the treatment. The practice of medicine, as a system, although resting in a great degree upon individual experiment, has certainly attained to the respectability of many well understood general principles. And they ought to lead us to a reasonably successful practice in this disease, though we should see it far less frequently than we do. There are many remedies and even modes of treatment that have been proposed, and this is not at all strange, if the pathological views herein presented approach correctness. Could any one hope to find a remedy, or even a specific mode of treatment for any disease embracing so wide a range! Should he seek to do so, in my judgement, he must from the necessities of the case only be disappointed. "The only management that can be satisfactory is one based upon general principles." (Dunglison.)

Such being the fact, it will be proper to remark upon remedies somewhat in classes—and first of bloodletting. This remedy claims an early consideration, both from its capability of effecting great good or mischief, and because, when it forms a part of the treatment, it should be performed early. That it is, in the well developed, purely inflammatory cases; those attended with a synochal grade of fever, a proper remedy, few medical men would dispute. So far from doing so, it appears to me, as not only proper, but absolutely necessary. And about twelve years ago, whilst practicing in the county of Chambers, in this State, I rarely saw a case of dysentery that was not bled in the very commencement of the treatment, and the impression is with marked benefit. But, in nearly all the cases that have come under my observation for a number of years, the grade of the accompanying fever has been entirely different, viz: of a low or typhoid type. And this is not only true of dysentery, but other inflammatory affections. The consequence is, that I seldom bleed in the disease under consideration; and it may be added, or any other. Still, I am not aware of any reason for being less satisfied with the success now, than when the lancet was frequently used. In many, perhaps, most of the cases of dysentery occurring here, the patient for the first few days has very little fever; it then comes on gradually; his pulse say eighty or ninety beats per minute; not at all corded or resisting; but soft and not fuller than in health. There is a certain degree of feebleness, and should the patient rise in bed, the pulse becomes much increased in frequency, and more feeble. Whilst lying down, as in the purer cases of typhoid fever, feels *pretty well.* But, when he rises to the close stool, feels and expresses strong tendency to syncope, and hurries back to bed. Now, it is asked, shall such a patient, old or young, male or female, be bled? I answer, no! and for the following reasons: He has a disease that will not, though he be bled, run its course in a very brief time. The seat of the disease is intimately associated with the blood-making department: to say nothing then of its first impression, the danger of dying from exhaustion must be very much increased. What are the objects of bleeding in inflammation? "Although the mere loss of blood *per se* may be of service (when that fluid is morbidly abundant) by relieving the system from a source of excitement, still the principle good effects in bleeding in inflammation depend on its sedative effects on the brain, and through the brain on the heart." (Druitt's Surgery.) It is barely possible

that the case supposed might have a morbid abundance of blood; but is a sedative effect on the brain and heart thus called for? and if there is not a morbid abundance of blood, would it not answer as well, for the patient to set up in bed as long as it would ordinarily take a man with pleuritis to be bled, from a large orifice, to syncope; and in this case induce an approach to fainting merely by thus sitting up?

Again: "The necessity for venesection, and its beneficial effects, will be great in proportion as the *tolerance* is greater." (Ibid.) To apply this rule, which is a correct one, the only conclusion is, that venesection in these typhoid cases promises little. But here is another case—the patient without heat, pale without thirst; pulse 80 or 100 per minute; feeble; tending to and actually rapidly increasing in frequency; tormina, tenesmus, frequent, and pretty free evacuations of mucous, blood, and fecal matter; the discharges in a short while becoming more liquid, *prarie-mud-like*; deathly nausea; vomiting a green, blue or black fluid. After continuing thus a few hours, possibly days; tongue very red and dry; thirst inextinguishable; great abdominal tenderness; prostration. Are not the indications here clearly against bleeding? But this is the disease as we sometimes have it. In such cases as have the intestinal or mesenteric glands actually diseased, accompanied with little fever, or fever of a typhoid type, I *never* bleed. But where the disease is more strictly confined to the mucous membrane, or should the peritoneal coat also be involved in the first period of the disease, as sometimes happens, and the fever is of the purely inflammatory grade, we may not hesitate to draw blood from the arm. Of leeches I know nothing; but of cups, my opinion, as compared with that expressed in most of the books, is not near so favorable.

The next class of remedies to be remarked on is purgatives. And it may first be said, that those long dreaded balls of hardened feces (scybala) are less frequently found in this, than in almost any of the diseases we are here called on to treat. It is occasionally the case that a dysenteric patient has his bowels somewhat loaded with fecal matter; and these full bellied cases that have tormina, with very small discharges, will usually be benefitted by a cathartic, say of rhubarb and magnesia; preceeded or not three or four hours by a *small* mercurial; or, if the grade of the fever approaches the synochal, epsom salts with or without magnesia, or the seidlitz powders or castor oil will answer a good purpose. Nearly all

the cases I see now-a-days, however, do not seem to at all require cathartics, and the most of them not the slightest laxative after the first few days. To the facts as touching this point: in many cases there is disgust for all kinds of food; the patient, therefore, takes nothing of the kind into the stomach; the bowels frequently expelling mucous with other liquids, the presumption is that the small portion of fecal matter is early suspended in the liquids and thrown off. The abdomen, at the same time, is flaccid and presents not the slightest appearance of accumulation of fecal matter, or even the tenth part of the usual quantity. In certain cases in which the abdomen presents much the same appearance as in health; the general symptoms indicating that the disease is confined to the descending colon and rectum, some fever, the combination of a laxative and opiate will answer a good purpose, as castor oil and tr. opii, thus:

℞. Ol. Ricini ℥i.
Pulv. Acacia—Sacchari. *aa* ʒij.
Tr. Opii. gtt. xl or lx.
Aqua Cinnamon diluted ℥vj.

Dose, a tablespoonful every three or four hours; or a rhubarb cordial. But one of the most useful still is the blue mass, opium and ipecac, thus:

℞. Pilulæ hydrargyri, grs. xxiv.
Pulv. Ipecac, " iv.
" Opii, " ij. or iij.

Ft. pilulæ viij. S. one every three or four hours.

In the commencement of the typhoid variety, and in the more purely inflammatory form, after the violence of the disease has been subdued by venesection, a cathartic or emetic, or both, the above pills will usually do good service. But, though the quantity of the first ingredient is small, it will often have to be reduced. Under the circumstances in which the pills have been recommended, I have rarely seen the following powder fail to make a good impression:

℞ Hydrg. cum. cretæ, grs, viij.
Cretæ. prep. " xx.
Pulv, opii, " iij.
" Ipecac " iv.

Ft. Pulv. viij. S. one every two, three or four hours.

These medicines modify the secretions, allay the tormina and tenesmus, promote action of the skin, and often the disease in a

few days entirely yields to them, unaided other than by the warm bath or fomentations to the abdomen.

Of emetics, particularly of warm water, aided, if necessary, by ipecac, it may be said that in the commencement of many attacks, especially such as are distinctly confined to the lower bowels, with a tolerably full abdomen and a furred, broad, moist tongue, they will be found useful. A few years ago, the writer was called to a plantation where the disease had been and was prevailing to a considerable extent; a variety of plans had been tried, not satisfactorily successful. During the visit, three or four new cases presented themselves, to every one of which we gave emetic doses of ipecac, with a grain of opium, to avoid purgation—and, to say the least, the final issue of the cures was more agreeable. But the remedy alone did not arrest the disease, by any means. In not a few of the cases seen in the last few years, however, vomiting, so far from requiring promotion, is to be combatted with opiates, blisters and such other means as may be suggested—but, after all, and before all, *ice* will be *the* remedy to address to the stomach; whilst anodyne and astringent enemata may be repeated as occasion requires. Water, iced and thrown into the bowels, is a remedy well worthy of trial.

Although mercurials, to a certain extent, are recommended in this paper, it ought to be observed, that in the typhoid variety, it is only in the first stages, and then in fractional doses, if they are to be repeated, that they should be given; for, in the advanced stage of the disease, in almost any quantity, they are often *poisonous*.

Opium is a remedy eminently calculated to meet the symptoms of dysentery, if the grade of fever or idiosyncrasy do not forbid its use. Nearly every case that does not at the time require bleeding or the action of a cathartic, will not only tolerate, but be very much benefitted by this remedy. That opium and astringents are indispensable in the treatment of many of the cases occurring hereabouts, no one, so far as I know, who has been engaged in their treatment, questions. Though the fever may not be violent, often the patient in a short time is very much run down by the tormina, tenesmus and the discharges; and nothing in the materia medica promises half so much, or *performs* the hundredth part so much as opium and astringents. To relieve the tormina, tenesmus and discharges, they are the *sine quæ non*. Though we have admitted the occasional necessity for cathartics, we read in every department of animated nature this great law—*rest forms an im-*

portant part of the treatment for inflammations. If the limbs have suffered from external violence, motion is avoided; if the eye is inflamed, light is shut out; if the pleura or lungs, the ribs must keep still; if an organ in the abdomen, the diaphragm must cease its contractions. So, in dysentery, the bowels *must* be quieted. Opium is the medicine to do it; and nothing is more erroneous than the giving of medicines to excite the bowels to action to throw off imaginary local irritants, which, if they were present, would not be at all tolerated. This is clearly shown by the fact, that any and all irritants taken into the stomach as food, speedily increase the tormina and discharges. Even the small portions of blue mass, or mercurial chalk, or rhubarb, or castor oil, or anything of the kind, may have to be avoided. But the opium, with or without the ipecac and cretæ prep., may be given; or the Hope's mixture will often do well, though the nitric acid in it had better be left out at times.

The following will prove, in many cases, an admirable anoydyne:

℞. Sulph. Morphine, grs. ij. or iij.
Aqua Camphora, ℥viij.

S., a tablespoonful every one, two or three hours as occasion requires.

The last formula, for certain cases, may be improved by the addition of ess. menth. pip., or the aqua menth. pip. may be substituted for the aqua camphora.

Of the astringents, the mineral, at least whilst there is fever, is usually to be preferred; and of these the acetas plumbi. If the patient has but little fever; abdomen soft; bowels comparatively empty; the discharges frequent, with tormina and tenesmus, the following pills may be expected to do well.

℞. Acetas Plumbi, grs. xvj.
Pulv. Opii, " iv.
" Ipecac " iv.
Cons. Rosæ or Micæ panis q. s.
Ut Fiant pilulæ, xvj.

S., one after each discharge, provided they are not required oftener than every hour.

If they are not sufficient to restrain the bowels and remove the tormina and tenesmus, an enema of liquid starch or tea of flax seed or slippery elm, say ℥ij., sulph. morphine, gr. ⅓, with or without the acetas plumbi, grs. ij. *a* viij., may be given and repeated according to demand. The lead sometimes nauseates when given

by the mouth; then it is better to give it only in enemata. But even thus, it will occasionally have that effect; then the tannin, which stands at the head of vegetable astringents, may be substituted, and indeed many other astringents. But, when the lead nor tannin does well, other astringents may be doubted. The best form *decidedly* for giving the lead by the mouth, is in *pill.* It is scarcely necessary to say, that when the fever is of the synochus grade, or comes on in distinct paroxysms, the sulph. quinine may beneficially be given. Blisters, in the latter stage of the disease, and comparatively early in those cases, attended with tympanitis and much pain, will do great good, and very few cases of dysentery ought to be permitted to terminate fatally without their having been used. Fomentations and poultices generally answer best in the early stage of any form, and should never be removed for blisters until they have been fairly tried. Of the former, a flannel bag containing hops, and wrung out of hot water, is light and soothing. Of the latter, a bran or bread poultice, sprinkled with mustard does well; but I think few local applications are so good, especially in the typhoid variety, as light bran or bread poultices, which, after being spread, are sprinkled with one or two drachms of muriate of ammonia, and renewed every few hours.

Though we have written somewhat in detail of the treatment, we close by repeating the quotation from Dunglison, "the only management that can be satisfactory is one based upon general principles."

ARTICLE IV.

A Surgical Operation under the influence of "Local Anæsthesia," induced by cold. By L. A. DUGAS, M.D., &c.

About 18 months ago, Mr. J. B., of Greene county, perceived a warty growth upon his right arm, over the insertion of the deltoid muscle. Observing that it was increasing in size, he endeavored to destroy it by the application of a silk ligature around its base. This, however, only aggravated the case, and the growth was shaved off by his medical adviser, who then applied ineffectually various agents to prevent its return. Every application, apparently, served only to add to the rapidity with which the disease extended and assumed the character of an epithelial, carcinomatous fungus. The patient subsequently placed himself

under several individuals, particularly celebrated as "cancer doctors"; the fungus was repeatedly removed more or less completely by means of the escharotics in common use; but would always return with renewed activity.

On the 2d instant, Mr. B. arrived here, and I found him in the following condition: The fungous growth was about the size of two fists, somewhat globular, with a flattened surface and projecting a little beyond the circumference of the attachment, so as to constitute this a neck of about four inches in diameter. The entire surface of the tumor presented the aspect of a ragged, mucous membrane or ulcer, from which there exuded an abundant discharge of the most fetid sero-purulent matter. The fetor was such indeed as to infect the whole apartment, to the very great annoyance of the patient and all who came about him. Around the attachment the skin was swollen, red, and evidently yielding to farther encroachments. The axillary glands were enlarged and tender to the touch. The patient's general health was much impaired, from incessant pain, despondency, and, above all, the intolerable stench which destroyed his appetite and kept him more or less nauseated. He urgently solicited the removal of the fungus and was willing even to suffer amputation, if deemed necessary.

In view of the patient's age, his cachectic condition, the doubtful advantage of the operation, &c., amputation was deemed unadvisable, and the simple extirpation of the offending mass was determined upon. From the extent of skin to be necessarily removed, it was evident that the edges of the wound could not be brought in contact after the operation. Yet there was no alternative, and this circumstance having been explained to the patient, as well as the probability that the disease would return soon or late, he very readily consented to the excision.

This was a case in which the administration of anæsthetics by inhalation could not have been carried very far without risk, and it was one remarkably well adapted to the use of a freezing mixture for the production of local anæsthesia. Prof. MEANS was therefore requested to prepare the usual frigorific compound of ice and salt and to superintend its application. This was done in presence of the Medical Class, and in less than four minutes the surface was congealed and the operation immediately performed; a double eliptical incision being carried through the integuments from the acromion process to within three inches of the elbow, and the parts included rapidly dissected away down to the muscles-

Under this extensive flaying the patient experienced so little pain that he now declares that the most unpleasant part of the operation was the dressing, or rather the application of the adhesive strips.

The congelation was so complete as to have solidified the adipose matter to such a degree that the knife felt as if passing through a mass of tallow. Not only was the surface blanched, but we have reason to believe that the effect of the application very materially lessened the amount of hemorrhage, inasmuch as this did not exceed a gill, whereas we had expected it to be very profuse. Ligatures were applied to three small vessels, although they bled very little, because it was deemed important to prevent even a small loss of blood under the circumstances. We regard this case as fully demonstrating the value of Arnott's plan of inducing local anæsthesia. It is now seven days since the operation was performed, and the patient's spirits, as well as general health, have so much improved as to allow him to return home. The wound seems to be doing remarkably well.

AUGUSTA, 9th Jan., 1855.

TRANSLATIONS AND CONDENSATIONS FROM FRENCH JOURNALS.

Treatment of Chorea.

The numerous modes of treatment which have been adopted for the relief of chorea, may be divided into two grand classes, according to their method of application and action. First, are the external remedies, viz: 1—Gymnastic exercises; 2—Sulphurous baths; 3—Cold baths and others; 4—Electricity; 5—Cutaneous irritants and revulsives. Secondly, the internal remedies, the most important of which are: 1—Antiphlogistics; 2—Evacuants (purgatives and emetics); 3—Tonics; 4—Narcotics; 5—Excitants of all kinds (strychnine, preparations of copper, nitrate of silver, arsenic, iodine and iodide of potassium); in short, medicines which are classed or unclassed under the name of *contra-stimulants, antispasmodics, and alteratives.*

Before passing in review these various curative methods, it is important to know whether the patient should be left alone, or have recourse to art. The expectant plan seems sufficiently justifiable, by the tendency which the disease has to spontaneous resolution, and by the resources of nature. But, to a certain point,

this question can be settled by comparing the results of this negative treatment to those furnished by other plans. In two cases, mentioned by M. Rufz, and four which we saw treated on the expectant plan, for four, eight, ten and thirty-two days, the disease, far from diminishing, persisted, or even went on increasing, notwithstanding rest, regimen and other hygienic means which were deemed sufficient to effect a cure. Thus the treatment requires medical art.

EXTERNAL TREATMENT.

1st. *Gymnastic exercise.*—In this division, we must place first the entirely new plan of treatment by gymnastic exercises, the result of which we give, after having carefully watched its application for more than a year.

Recommended by Darwin, and later by Mason Good, muscular exercise was first attempted by Louvet-Lamarre. The patient was a young girl, who was attacked for the fourth or fifth time. After an unsuccessful trial of various treatments, rope jumping every day was advised, at the same time that bleeding was resorted to. From the sixteenth day the agitation was scarcely perceptible, and in twenty days the cure was complete. This vague and complex case proved nothing in favor of the remedy, which remained forgotten until the physicians of the Hospital for Children, among others M. M. Bouneau, Baudelocque, Guersant and Blache, struck no doubt, as ourself, by the advantages of gymnastics in scrofulous and the other cachectic conditions, conceived the idea of applying it to the treatment of nervous diseases, particularly to chorea, which, besides the perturbations of the nervous system, so frequently induces disorders of nutrition and organic functions.

The treatment must be commenced with simple and harmonious movements, exercising the larynx at the same time by singing. The patient, standing up, should flex and extend the knees and elbows, keeping time with the music. Such are the first steps necessary to place these movements under the influence of the will. The rapidity of this result will be in proportion to the attention, intelligence and character of the patient. It is frequently impossible to do any thing until the patient has been won by kindness.

After the muscles can be controlled as above, walking at a slow or quick pace, running, jumping, suspension by the arms, or more complicated movements should be attempted, graduating them however, to the state of the disease, and repeating them every

day, for not more than fifteen or twenty-five minutes, so as to avoid muscular fatigue and palpitations of the heart, which sometimes occur after too much exercise.

By this treatment, no matter how violent the disease, from the first lessons—sometimes from the very first one—but not later than the fifth or sixth, a manifest change can be seen in the abnormal movements. At the end of eight days, if the patient cannot stand erect, walk in a straight line or suspend himself by the arms, it is doubtful if this plan will succeed; it is certain, however, that the treatment will be long or difficult.

In all cases, after the first corrections of the muscular actions, there is generally a period of arrest, and sometimes eight, and even fifteen days will pass without progress, after which the movements become more regular and take on their habitual precision; the functions of nutrition are re-established; children who were thin and debilitated, recover their appetite, their digestive faculties, their natural color, their strength and particularly their fleshiness.

This is one of the most remarkable results of this treatment, and when once produced, it is not long before gayety, good humor, memory and attention are observed; the countenance alone seems to remain unchanged, and this condition often still exists even when all traces of the disease have left the extremities. The arterial and cardiac sounds are the last phenomena to disappear; but, unless these depend upon a diseased condition of the endo-cardium, they yield more readily to this treatment, properly conducted, than to any other. Save the co-existence of an inflammatory or an organic affection of the heart, gymnastic exercises can be resorted to. Of 22 children, 16 were cured completely and rapidly, for the treatment was on an average 29 days. In two others, the treatment was interrupted by a febrile condition which hastened the cure, so that upon the whole, 18 out of 22 cases will recover.

When the exercises were combined with other remedies, the results were much less satisfactory. Instead of 18 in 22 recovering, the addition of sulphurous baths gave only 8 in 11, and the addition of tonics 3 in 5; and besides, these means, called *auxiliary*, instead of curing the patients in 29 days, succeeded only at the end of 33 and even 48 days. The most simple means, then, are the most successful, and whenever the condition of the heart will allow it, recourse should be had to this plan. In this manner it will be easy to relieve simple or long standing chorea, cases of relapse or those just complicated with fever. The natural course

of the disease aids powerfully in causing the accidents to disappear; and this is so true, that in 29 cases of recovery, 5 were complicated with fever, 12 relapses, 7 of long standing and 5 recent; whilst in 9 cases more or less unsuccessful, there were none but recent cases. It is therefore impossible to conceal the difficulty to arrest the disease at its outset, but this difficulty is much greater in the other plans of treatment.

That which establishes definitely the superiority of this plan, is: 1st, that it relieves constantly cases of relapse and those of long standing; 2d, that it shortens very much more the duration of the disease than most of the other treatments.

2d. *Sulphur Baths.*—In 65 cases treated by M. M. Baudelocque, Blache, Rufz and Constant, 58 were rapidly and permanently cured. The baths, which are to be repeated every day, and for at least an hour, must contain 120 grammes of sulphate of potassium to every 8 buckets of water at 26° Reaumur.

Generally, from the second or third bath, the patient begins to improve. Sometimes, however, amelioration is not perceptible until after 12 or 15 days, when it commences and goes on rapidly, requiring on an average 22 days to restore the natural functions of all the muscles excepting those of the face.

After using the bath for sometime, and occasionally after the first few days, an eruption of little red pimples, sometimes confluent and in large patches, appears on the abdomen and extremities, and occasionally upon the whole surface, accompanied by a certain degree of heat. As soon as this eruption appears, and during its continuance, all medication must be suspended and simple diet and rest enjoined. After it has subsided, the treatment may be continued, but should it appear again, this treatment must be abandoned. Denuded surfaces, as blisters, &c., will prevent the treatment, as the constant irritation of these surfaces produced by the baths counteract their good effects.

Acute irritation of the serous membranes, though rare, contra-indicates this treatment. Notwithstanding all these accidents, 50 out of 57 cases were cured on an average of 22 days; showing a larger number of cures, in a shorter time, by this method, than by that of gymnastics.

Adjuvants seem only to retard the cure. The bath, combined with good diet and the use of a little wine, will be sufficient of themselves.

3d. *Cold baths, cold affusions, sea baths, vapour baths and others.*—

That which seems the most efficacious of these plans, is the cold bath, as used at the Hôpital des Enfants. Incontestable success is due to this treatment, 5 out of 6 patients who were bathed in water at from 18 to 20 degrees were cured.* The efficacy of this remedy, consequently, does not appear to be much inferior to the sulphurous medication, except in its application, when the latter plan is superior. Children never take the cold bath without extreme repugnance, and if they are not administered with great care, the patients may take cold, and the disease, which was until then simple, becomes complicated with a rheumatic or an inflammatory tendency.† This plan of treatment was abandoned at the Hôpital des Enfants, in consequence of its disadvantages, the sulphur baths being so much more prompt in its action—curing the patients in 22 days, whilst the cold baths required from 40 to 47 days.

Simple and vapor baths possess no virtue in themselves, neither do aromatic baths or fumigations. The hydropathic pack and gorging with cold water is equally valueless. The three first methods, viz: gymnastic exercises, sulphur baths and cold baths, are all of any utility that is known of external medication; but the list is not yet exhausted, and there still remain to be described the treatment by electricity and revulsives of all kinds.

4th. *Electricity.*—This plan of treatment was first brought into notice by de Haën, of Vienna, which had its advocates; but its effects are so slow, that they might very well be mistaken for the natural efforts of nature.

5th. *Liniments, ointments and issues.*—This plan of treatment has met with such very doubtful success, that it is unnecessary to give the details.

The methods which should take or preserve their rank in the external treatment of chorea, are: 1st, gymnastic exercises; 2d, sulphur baths; 3d, cold baths; and, 4th, electricity, which seems to be of some utility in certain cases. (Dr. G. Sée.)

Iron and Manganese.

M. De Larue speaks highly of the combination of iron and manganese in hematic affections, and says he has frequently proved its good effects at the bed-side. In a certain number of chlorotic

*Of these 5 patients, two were treated at the same time with preparations of sulphur, and another owed its cure, perhaps, to the intervention of a febrile condition.

†It is known that a frequent cause of chorea is a sudden immersion in cold water. Dupuytren cites an example.

cases *especially*, which had resisted treatment with iron alone, were relieved, as by enchantment, when manganese was added.

He gives the following case, taken from among similar ones, to demonstrate the value of this treatment:

Miss X., aged 16; of a bilioso-nervous temperament; delicate constitution; had been affected with well marked chlorosis for about 20 months; had not menstruated for two years.

He saw the patient in August, 1853, and advised the continuance of iron. After a month of fruitless attempts, he prescribed manganese with the iron, and in less than eight days all the symptoms were relieved, and very soon the cure was complete.

The patient was submitted to this treatment but four weeks, and has continued from that time to enjoy excellent health.

He prefers administering the medicine in pills, generally four daily; two morning and night, and as near the time of meals as possible. Formula for making the pills:

℞. Sub. Carbonate of iron, 30 grammes,
Sulphate of Manganese, 10 "
Ext. of Licorice, q. s.
Divide into 100 pills—4 to be taken daily.

[*Revue de Thérap. Médico-Chir.*

A practical inquiry into the advantages derivable from the Vapour of Chloroform, as a local application to the surface of the Skin and Mucous Membrane under various conditions. By S. L. HARDY, M. D., F.R.C.S., &c., &c.

[Concluded from page 49.]

3d. THE EFFECTS PRUDUCED BY THE VAPOUR OF CHLOROFORM WHEN APPLIED TO MUCOUS SURFACES UNBROKEN.

Mucous surfaces seem to be particularly eligible for receiving the influence of chloroform vapour. When its local application was first brought before the notice of the profession, I alluded to the sensation of heat which was experienced when those tissues were subjected to its action. In some instances this is so great that it is complained of a good deal, but I have never met with any case in which it was necessary to relinquish its use on that account. Ceasing to propel the vapour for a few seconds was quite sufficient to enable the patient to bear it. The relief afforded is in general so agreeable that many would willingly endure a greater feeling of discomfort rather than be deprived of its efficacy. The following cases are given in illustration:—

No. 22. *Case of Painful Hæmorrhoids.*—At a meeting of the Surgical Society already alluded to, Dr. Forrest detailed the following case:—

"A gentleman, ætat. about 36, who had suffered from piles on several occasions, sent for me, owing to an attack of his old complaint. I found the mucous membrane of the anus, everted with several hæmorrhoids attached to it. The pain was so very severe, notwithstanding the use of fomentations which had formerly relieved him, that no pressure could be borne, nor any attempt be made to return them. The vapour of chloroform was them applied by the douche for several minutes, which produced so soothing an effect that I was able to press them within the sphincter without causing him any uneasiness."

No. 23. *Pain in the Ear.*—The following case of pain in the ear shows the necessity of having the vapour propelled for a sufficient length of time:—

"A young lady, during the course of an illness, was troubled with very severe pain in the left ear, running down the side of her face, for which I directed the application of chloroform vapour. Next morning she told me it had given her no relief, and she continued to suffer as before. Supposing that the instrument had not been properly used, I applied it myself, and in about from five to ten minutes observed the countenance altering from an expression of pain to one of ease. Presently the lady said she was perfectly relieved."

No. 24. *Case of Abnormal Sounds in the Ear.*—The *Medical Times and Gazette* for June 17, p. 618, contains the report of a case of abnormal sounds in the ear, which had for six weeks resisted various remedies, as syringing, aperients, alteratives, and blisters. A few applications of the vapour of chloroform completely removed the complaint.

No. 25. *Case of Irritable Bladder.*—A female patient, ætat. 37, the mother of one child, had suffered so much from irritation of the bladder for two years, but particularly during the month of July last, that her state was most distressing. The calls to micturate were incessant, and always attended with very severe pain. By means of a catheter attached to the douche, I threw the vapour of chloroform into the bladder, occasionally removing the nozzle of the douche from the end of the catheter, to allow the vapour to return. Great heat was at first complained of, but (by ceasing at intervals) the operation was continued for about five minutes. Next day the woman informed me that after the application of the chloroform, she was able to walk a distance of about two miles without being under the necessity of relieving the bladder. When she did pass water, it was in much greater quantity than it had been for a long time, and attended with less pain. The

vapour was used on the second day with like beneficial results. Afterwards hip-baths and diluents completed the cure.

No. 26. *Case of Spasmotic Pain after Delivery.* ——, ætat. 26, nearly nine years married, had four children and several abortions; suffered much from great irritability of the uterus, which was affected frequently with congestion and excoriation. Previous to, and since marriage, menstruation was always exceedingly painful during the first day of its appearance.

On the second day after the birth of her second child, and while recovering favorably, she was suddenly seized with most excruciating spasmotic pains in the uterine region, recurring in paroxysms, which caused her to scream from intense agony. Fomentations, with the internal administration of spt. of turpentine, opium, &c., at length (in the course of about three hours) quieted this distress, and her recovery progressed as before. Within an hour after the birth of her third child, she had similar spasms, in character somewhat like after-pains, recurring in violent exacerbations, which lasted for about an hour, and again on the fifth day. The inhalation of chloroform was resorted to with good effect, always relieving her when so attacked.

On the fifth day after her last (the fourth) confinement, and without anything to account for it, the spasms set in with their usual violence, the distress felt in the situation of the anus being particularly severe, owing to the action of the sphincter. Inhalation of chloroform was resorted to, which gave relief so long as the soporific state existed; but no sooner did this go off, than the paroxysms were renewed. The vapour of chloroform was then thrown into the rectum by means of the douche for about five minutes, by which the spasms were not only relieved at the time of its application, but afterwards there was no return of them whatever, and the recovery was most favorable.

This lady when between seven and eight months pregnant on the last occasion, suffered greatly from vesical irritation. The calls to micturate were incessant, depriving her of all comfort by day and of rest at night; so much so, that her general health seemed likely to suffer. The chloroform vapour thrown into the vagina for a few minutes at bed-time, procured for her so much relief that she was seldom disturbed, and had quiet sleep.

In my remarks on Cases 2 and 3 (*Dublin Journal* for Nov. 1853, p. 311,) I made the following observations:—

"It is deserving of notice that in Case 2, the duration of the menstrual period was much lengthened, from which circumstance it may be inferred that the application has not only the effect of saving the patient from her usual degree of suffering, but by subduing the spasmotic action of the uterus, tends towards the production of a more natural secretion. As yet I have not had an opportunity of testing its efficacy thus in the patient of Case 3. It is her intention, however, to resort to its use when next about

to menstruate, so that at a future time the results may be laid before the reader."

Of Case 3, it is stated, "menstruation, both before marriage and to this time, was always very painful, the discharge *scanty*, and dysmenorrhœal membrane frequently expelled." Before detailing the progress of the case, I would beg to direct attention first to the following remarks on chloroform as an emmenagogue.

On the Emmenagogue Properties of Chloroform.—In the *Hygeia* for February, 1854, p. 98, Dr. Gibson states "that inhalations of chloroform have an emmenagogue effect, and he relates five cases of irregular, insufficient, and wholly suppressed menstruation, in which this remedy was employed with good results. Van Dye confirmed this observation in a case of amenorrhœa, in which he made the patient inhale chloroform on account of spasms accompanying the amenorrhœa. The spasmotic symptoms which had occurred in various organs were removed, and after some time menstruation set in. Van Dye is therefore also of opinion that chloroform deserves especial attention as an emmenagoge."

The *Journal de Hygeia*, Feb., 1854, p. 98, taking it from the *Medical Examiner*, adds: "A slightly prolonged inhalation of chloroform excited, at the end of twenty or thirty minutes, the flow of the menstrual fluid."

Chloroform is doubtless emmenagogue, like opium, valerian, ether, &c.; that is to say, it causes a cessation of the nervous alteration which opposes the menstrual flux.—*Journal de Chimie Médicale*, April, 1854, p. 256.

No. 27. *Painful and Scanty Menstruation.*—When this patient (Case 3 continued) perceived the catamenial distress commencing, the application of the vapour was resorted to, and repeated on each return of uneasiness, by which she menstruated without any suffering. On the three following occasions it caused similar results, the secretion taking place in *proper quantity*, and free from pain. Her last two menstrual periods were perfectly natural in every respect, unaided by the use of chloroform.

No. 28. *Case of Painful Menstruation.*—A patient, ætat. 31, married seven months to her second husband. By her first (with whom she lived nine years) she became pregnant soon after marriage, and aborted at the second month. Since then she did not again conceive, and menstruation which, previous to her pregnancy, had been healthy, regular in its returns, and without pain from the time of the miscarriage, had on its approach, and until after the first day of its appearance, been attended with distressing sensations in the back, loins, and particularly in her breasts. The use of chloroform vapour gave her perfect ease, relief on each application commencing first in the back and immediately after extending to the breasts.

No. 29. *Case in which Menstruation was Scanty and Painful, and finally Ceased.* ——, ætat. 35, enjoyed excellent health; menstruated regularly for three days, and free from any discomfort until her marriage, which took place nine years ago. After this event, she gave birth to a male child, which lived for six months. During lactation, the catamenia appeared each month as formerly. From this time her health gradually declined, and in the course of a year, notwithstanding medical treatment, she was in a very debilitated state. I first saw her four years after her confinement. Pregnancy had not taken place; her menstrual periods in their approach, and while present, were accompanied with severe pains occurring at intervals, and the flow continued for scarcely one day. Ulceration of the os uteri, which I treated her for, soon got well, her health was restored, and she again concevied, but owing to an accident aborted at the third month. Although by the miscarriage her general health suffered little, yet from this date menstruation steadily lessened in quantity, but was not attended with pain, until at length it entirely ceased, without there being any reason to attribute this circumstance to the existence of pregnancy. As the secretion diminished, her head and chest became very much affected with what she described as a "bursting sensation," which was particularly distressing at the time of each expected return of the catamenia. She was becoming very fat, and had a feeling of general discomfort. Various remedies had been tried in order to restore the uterine secretion and to relieve those uncomfortable sensations, but to no purpose. I now directed the vapour of chloroform to be thrown into the vagina when the next period was known to be approaching. On the first occasion menstruation was established and continued for two days: on the three following, the same means having been resorted to, it flowed for three days in proper quantity, and with the absence of all the uneasy feelings above described. It now comes naturally and without the use of chloroform, and in every respect her health is perfect.

No. 30. *Case of severe Uterine Pain, with Suppression of Menstruation.*—A lady of strong and healthy appearance, residing in the country, consulted me in September, 1852. She had given birth to two children, and had aborted several times. Since her last miscarriage, which was caused by jumping from a height, she felt a disagreeable sensation, of a painful nature, in the uterine region, and menstruation becoming more and more scanty, and irregular, had entirely ceased. She was very languid and incapable of much exertion. On examination, the os uteri was found extensively ulcerated and the cervix enlarged. Her health having improved, and the uterus being healed, she returned to the country, where she made use of shower and hip-baths, and took gentle exercise on horseback, which served her greatly. Again her health declined, and she consulted a neighboring practitioner, under whose treatment she continued for a considerable time.

Afterwards she came to town, and informed me that owing to severe pain in her back and uterus, she was unable to sit for any length of time in the erect position, particularly in the evenings. All those symptoms were greatly aggravated periodically, when menstruation should be present. The uterus was rather larger than natural, but had no abrasion, and the cervical canal was pervious. I commenced the local application of chloroform vapour at the expected catamenial period. The following is the report given in a letter by the patient herself:—"It is with much pleasure I tell you the result of the chloroform ordered by you. While in town it enabled me to walk without pain in my back, or the very disagreeable internal pain, or *gnawing* feel, which I had for some time—I may say for years. I had not a change for the last twenty months; but having used the chloroform for ten days, it came on, which though scanty, I feel is all right. There was no pain whatever, as (when I began to feel uneasy) I used the chloroform. It has done wonders for me already."

I lately received the following letter from this lady:—

"I am able to take a great deal of exercise without fatigue, and when I have pain I use the chloroform, which has not in the least lost its effect, but soothes me at once." It is now five months since its application was commenced.

No. 31. *Violent Vomiting.*—A patient, ætat. 20, was attacked in the month of August last with gastric fever. For the first four days, irritability of the stomach was very great, nothing whatever being retained for more than a few minutes. The vomiting was most severe, and frequently occurred in violent paroxysms. The remedies usually resorted to in such cases, as ice, creosote, prussic acid, blistering, &c., were tried in vain. At this time, by means of the douche, the vapour of chloroform was thrown into the rectum for several minutes. It felt most agreeable to the sufferer, and in some measure mitigated the violence and frequency of vomiting. At intervals of an hour, the application was twice repeated. After the third exhibition of the vapour, all vomiting ceased; drinks and medicine were swallowed without exciting any tendency to it, and for a fortnight it did not return. So much relief was felt from first using the chloroform that the patient anxiously requested a repetition of it.

No. 32. *Painful Flatulent Distension of the Intestines.*—A woman in Steevens' Hospital, under the care of Dr. Croker, in August last, for flatulent distension of the intestines, suffered so much from pains and disagreeable sensations that, in addition to the treatment adopted, the vapour of chloroform was thrown into the rectum by the douche, for about five minutes, three times daily. The patient for three hours after each application of the vapour, said she felt more ease than she had for months past. It was continued for some time, but whether it had lost its efficacy, or had

not been properly used, she said it did not afford as much relief as at first.

No. 33. *Case of Bronchitis in an Infant, attended with Sleeplessness.*—(Under the care of Dr. RINGLAND.)—A child, eight weeks old, attacked with bronchitis, through great distress from difficulty of breathing, arising from the enormous accumulation of mucus in the air-passages, as well as from general irritability during a period of seventy-two hours, never slept for a single moment, and was evidently sinking, chiefly from exhaustion from want of sleep. Many remedies were employed without the least benefit; at length a small quantity of chloroform vapour was injected into the rectum by means of Hardy's anæsthetic douche, ranging from six to nine jets. After an interval of less than fifteen minutes the child became more tranquil, and shortly fell into an uneasy sleep, which lasted nearly two hours. When it awoke it took the breast, which it had previously refused for several hours, having been fed with breast milk from the spoon. The vapour was again had recourse to in like manner as before, when the child, after a very brief space, fell into a quiet and almost natural sleep, which continued for several hours, and it became necessary to awake it to take nourishment. The chloroform vapour was frequently used in the subsequent progress of the case (which terminated favourably) and always with equal advantage. Had not rest been procured, the child must have sunk before there was time for the other remedies employed to have effect.—*Medical Press*, April 19, 1854.

[Under the 3rd Division—"The effect of Chloroform vapour on Mucous Surfaces Unbroken"—the following cases may be referred to in the *Dublin Journal* for November:—Case 2. "Scanty and painful menstruation in which the chloroform vapour enabled the patient to menstruate without pain, and lengthened the duration of it from one to three days." Case 5. "Violent Uterine Pain." Page 317, same number—"Case of Pruritus Pudendi." Two Cases of "Pain in the Ear," *Medical Press*, April 19, p. 242.]

4TH. THE EFFECTS PRODUCED BY CHLOROFORM VAPOUR WHEN APPLIED TO MUCOUS SURFACES IN AN ABRADED OR ULCERATED CONDITION.

The vapour of chloroform when applied to mucous surfaces abraded or ulcerated, generally causes a good deal of the sensation of heat; but although this feeling is more frequent and of longer duration than where the surface is unbroken, it is not so extreme as to prevent patients from easily bearing it. The following cases will serve to illustrate its influence when applied under these circumstances:—

No. 34. *Case of Ulceration of the Os Uteri.*—A patient, the subject of very extensive ulceration of the os uteri, suffered so

much from lumbar pain and general distress in the uterine region, that the vapour of chloroform was applied in the usual manner, by means of the douche. The heat and scalding sensation was so great that until after the lapse of half an hour from its application, no beneficial effect could be perceived. No sooner had the uneasiness caused by the chloroform subsided, than the relief was complete, and of very considerable duration.

No. 35. *Elongation of the Cervix Uteri.*—On the 20th October last, late in the evening, I was called to a patient who was suffering from violent expulsive pains, which I found on examination to depend on an elongated growth from the uterine cervix, so long that it protruded through the os externum. The mucous membrane of the uterus was abraded, and the vaginal canal felt extremely painful to the touch. By an opiate suppository and draught, the pains were quieted, and the woman had a good night's rest. On the next day I placed a ligature on the tumour, and until the third day (when I removed it below the ligature by a curved scissors) the pains were on each return perfectly removed by the vapour of chloroform thrown into the vagina by the douche. No complaint whatever was made during its application to the abraded mucous membrane.

No. 36. *Cancerous Ulceration of the Rectum.*—The *Medical Times and Gazette* for August 19, page 195, contains the results obtained by M. Gonzales Conde. It says:—"The Spanish professor has, after the example of the originator, Dr. Hardy, tested the local power of the anæsthetic to assuage the pains of cancerous ulcers. The cases were those of ulceration of the interior of the rectum, accompanied by most severe suffering, such as ordinary sedatives were insufficient to calm. M. Conde employed a bottle containing a sufficient quantity of chloroform. Its mouth was occupied by a well-fitting cork, through a hole in which a gum-elastic catheter was passed. The sound was introduced so far, that its apertures were in direct contact with the ulcerated surface. The vaporization of the chloroform was commenced; first, by the application of the hands to the bottle which contained it, then by bringing near it a heated stove. The patient experienced a slight pricking sensation, which took the place of the cancerous pains. This sensation extended upwards towards the colon. From the rectum some gas escaped, having the odor of chloroform. The sufferings were quickly appeased, but the most remarkable circumstance was that the pulse, which at the commencement of the experiment was accelerated, fell first to its natural rythm, and then sunk to sixty beats in a minute. The ease, however, bestowed by the chloroform, was not limited in its duration by the effect produced on the pulse. For a week the pains did not return, nor was it necessary to reapply the anæsthetic for the whole of that period.—*El Heraldo Medico*, June, 1854, page 165.

[Under the 4th Division see also, in *Dublin Journal* for November—Case 1. "Cancerous Ulceration of the Uterus."—*Medical Press* for April 19th—"Cancer of the Rectum opening into the Vagina."]

General Observations.—In making a few brief observations on the cases above detailed, I would direct the reader's attention to the remarkable influence exerted by chloroform vapour in cancerous ulceration. I may refer to Dr. Mayne's case (No. 19) in which he says, "opium afforded her but little relief, and various other sedatives and narcotics were tried in vain;" and (No. 20) where we are informed by Dr. Moissenet that "he has succeeded, especially in a case of cancroid ulcer of the forehead, in instantly and repeatedly allaying dreadful sufferings, which had resisted all known remedies." The duration of relief obtained by the application of chloroform vapour is very striking, and was one of the first things in its action that attracted my attention. In the *Dublin Journal* for November, p. 308, I stated, "the relief afforded by the local application of the vapour of chloroform is not of a very transient nature;" as examples, see Case 5 in same journal, p. 315; No. 13, in Mr. Wilmot's communication; Nos. 16 and 17 in Dr. Geoghegan's; and Nos. 9, 25, 33, and 35.

Although it is stated in No. 32 (Case of Painful Distension) that the relief was not as much after the application of the vapour had been continued for some time, I question whether it was properly applied on each occasion, having never met with another instance of diminished efficacy in its use. (It was the patient herself who generally used the douche.)

In the Case of Gout (No. 9) it is stated, "the part subjected to the vapour of chloroform had become pale and cold, instead of red and burning, as it had been before." As some might fear on account of the cold caused by it to resort to its application in gout, I may inform them that this obstacle can easily be removed by using the vapour douche, which has a small metalic ball attached, and by heating this ball by a spirit-lamp, air of any temperature (most agreeable to the patient) may be transmitted with chloroform vapour. If desirable, moist, instead of dry, vapour can be formed by pouring a little water into the ball, and may be medicated by the addition of extract of belladonna, watery extract of opium, &c.

The vapour douche is so small that with all its fittings it could be easily carried in a small dressing case. A chloroform bath can be given with it instantly, and hot vapour, moist or dry, in about five minutes (the time required for heating the ball.)

See (No. 10). A similar case treated by the combination of chloroform and warm water vapours, the affected part being placed in an air-tight case. As a means of alleviating pain during operations, the local application of chloroform vapour can be of service in but a very limited number of cases, and those only be-

longing to the minor operations in surgery, where the disease is superficial and the cuticle very thin or abraded. No. 8 (Mr. Smyly's Case) is an example of the first; and Nos. 10 and 11 (Anthrax), of the second requirement. The same remark is applicable also to No. 14 (Issue.)

No. 15 (Case of Painful Stump) serves to show of what great advantage it may be in gunshot wounds, where extraction of the ball is necessary. A stream of chloroform vapour passed into the wound might enable the sufferer to undergo the operation without the least pain.

It was supposed that as the vapour of ether had caused griping when thrown into the intestines, that of chloroform should have had a similar effect. Nos. 30, 31, and 32, serves to show that this is not so, and we are informed by M. Ehrenreich of Germany (Medical Press, April 12), that "he has found the most marked benefit from the local action of chloroform, more especially in the excruciating pains of tenesmus in dysentery." The influence exerted on the uterine system by chloroform in allaying inordinate contractions, is exhibited by Nos. 25, 26, 27, 28, and 29. From this knowledge, a very important step might be taken in the treatment of patients who are the subjects of early abortion, and whose cases are so frequently mistaken for dysmenorrhœal affections.—If, on the approach of a catamenial period, the vapour of chloroform be thrown into the vagina, which, acting as an antispasmodic, has the power of keeping the uterus at rest, the presence of the ovum may be prevented from exciting the contraction which otherwise would have caused its expulsion; or those contractions which, established by habit, have the effect of causing abortion, might be kept so perfectly controlled that pregnancy may proceed without interruption. This remedy possesses advantages in such cases over opium and other narcotics, in that it exerts, when applied locally, no unpleasant effects; so that a patient can enjoy her usual sensations while the uterine system is *alone* under its influence. In cases of this nature particular instructions should be given to use the douche very gently.

When speaking on the method of applying chloroform vapour (as reported in the Medical Press for April 19), I made the following remarks: "If the vapour is not confined, either no influence will be exerted, or to produce an effect, a very unnecessary waste of material must be the result; but besides confining it, a sufficient quantity should be thrown, and with a force proportioned to the extent of surface over which it has to pass." On referring to No. 2 (Dr. Kirkpatrick's Case of Tetanus), a glass-bell was attached to the tube of the douche, that the vapour might not escape. In No. 4 (Phthisis), and in Nos. 12 and 13 (Mr. Wilmot's), the same precaution was observed. In Dr. Geoghegan's observations this point is particularly noticed; and in a Spanish journal (*El Porvenir Medico*), it is stated that "M. Figuier, with a view of favoring the absorption of chloroform, proposes to apply it at a

temperature of 50 (122 deg. Fah.), and to confine it by means of an impermeable apparatus of gum-elastic."

I have been informed by Mr. Brown, Resident-Surgeon in Steevens' Hospital, of a case of ulceration of the cartilages of the knee-joint, in which great relief from pain was obtained by baths of chloroform and hot water applied by the vapour douche.

The local application of chloroform vapour recommends itself to our careful attention, not only as a powerfully efficient and rapidly active agent, but as a remedy which is as safe as efficacious. Twelve months have passed since it came into practice, and the foregoing cases may, in a measure, testify to what extent it has been tried, both at home and in other countries, during that time; but in no instance that has come to my knowledge has its use been attended or followed by either the slightest accident or injury.—[*Dublin Medical Press.*

On the tic-tac felt by the hand as a means of Diagnosis in Disease of the Heart; an excerpt from the recent work of M. RACLE on Diagnosis, with a few comments. By HENRY MELVILLE, M.D., Edinburgh.

During the year 1852, a letter from a friend, at that time residing in Paris, made me acquainted with this mode of examination, adopted by M. Bouillaud, in general terms. Since then I have been in the habit of paying some attention to the phenomena so presented by healthy and diseased hearts, but without arriving at any results of diagnostic value. This has arisen, undoubtedly, from the want of sufficient information as to the points to which the observations made should be directed, and the connection between the phenomena observed and their interpretation.

It was therefore with much pleasure and satisfaction that I read, in M. Racle's recent admirable work on Diagnosis, the following account of M. Bouillaud's method; and believing it to possess great practical advantages, apart from the interest of its novelty, I have endeavored to translate it for the pages of the Monthly, in the hope that it may be acceptable to its readers.

"M. Bouillaud, who has studied this physiological phenomenon during six or seven years only, has not as yet published any of his observations on the subject, and no one else, to our knowledge, has paid any attention to it. The learned Professor has kindly permitted me to make known in this work those results, altogether novel and unrecorded, which he has obtained.

"Every one knows that on applying the hand over the precordial region there is felt, what is called, the beating of the heart; but hitherto we have limited ourselves to establish by this means the stroke of the apex, and to ascertain the force, the extent and the intensity of this stroke; we have attempted nothing beyond this.* However, if we feel with attention

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* See *a* on page 98.

the heart's action, we shall perceive distinctly two beats, two movements connected one with the other, and which convey a sensation of tic-tac so like that which we discover by auscultation, that it appears as if we *heard* the heart with the hand. This is by no means an acoustic phenomenon, it is simply the sensation of the double movement of the heart. This perception obtained by the nerves of general sensibility, and which seems to be transformed for the observer into a sonorous phenomenon, is altogether comparable to the perception of vibrating and sonous rales, of the frictions which occur in the pleura, and which we can appreciate by the application of the hand;* it resembles, also, the non-sonorous grumbling of the intestines; we know indeed that it often happens, that on pressing on the abdomen we think we hear this grumbling, while in reality we only feel the displacement and the movements of the contained gas and liquids, and which other persons do not hear, because they do not feel them. The perception of the beatings of the heart of which we now speak, is a phenomenon of this kind; it falls simply under the category of tactile phenomena, as well as the crepitation of fractured bones, subcutaneous emphysema, &c.

"In some individuals, this double movement is scarcely perceptible; in others it is so strong that it seems as if we held the heart in the hand, and that we felt it contract and dilate alternately.

"These two movements are closely connected, one with the other, and are followed by a pause sufficiently long, the great rest of the heart; they correspond to the systole and diastole of the organ, and are synchronous with the first and second sounds.

"They have, like the sounds of the heart, different characters; the first is dull, prolonged, the second is shorter and sharper; both resemble the noises (claquements), which we perceive on working a suction and forcing pump, and which are due to the alternating movements of its valves. We attribute them, like the sounds of the heart, to the alternating tension of the valves, and we retain for them the name *claquements* of the valves, or *valvular*, which has been so properly given to them by M. Bouillaud.

"They have not the same seat; the first is more particularly perceptible at the apex of the heart, the second at its base. M. Bouillaud attributes the first to the tension of the auriculo-ventricular valves during the systole of the heart, it corresponds also with the stroke of the apex; the second has its greatest intensity at the base of the heart, and on a level with the ventriculo-arterial orifices; it occurs indeed in these orifices and results from the tension or fall of the sigmoid valves of the aorta and pulmonary artery.

"Each of them by its seat and moreover, by its character, is entirely in accordance with the nature of the valves which produce it. The first movement is dull, deep, and has something greasy in its character, which reminds one of the thickness, and greater laxity of the auriculo-ventricular valves. These characters seem also to be due to the fact, that these valves are inserted in the thick, soft and fleshy walls. The sharpness, the shock of the second movement depends upon the thinness, the rigidity of the sigmoid valves, and we can readily perceive that they occur in superficial organs with thin parietes and of a certain firmness, (the arterial parietes).

"The characters of these movements vary with the condition of the valves, and of the parts in which they are inserted; they become more marked if the valves are indurated, have become cartilaginous or osseous;

* See *b* on page 98.

they are smothered, roughened, if these are thickened, have become soft, &c.; finally they disappear more or less completely, sometimes one, sometimes the other, if the valves are destroyed, cease to act freely, &c. We can derive, in a diagnostic point of view, very valuable information from the modifications of these movements as perceived by the hand."

To this description M. Racle adds the following note, furnished by M. Bouillaud himself:

"If we accustom ourselves, by means of continued and attentive practice, to the exploration of the different movements of the heart, by the application of the hand, (*the touch, palpation,*) it will become easy to distinguish the ventricular movements of systole and diastole, from the movements of valvular play, the essential cause of the double sound known under the name of the tic-tac of the heart, which consequently, more appropriately deserves the term *valvular tic-tac*, which we have for a long time bestowed upon it. In the study of this new phenomenon which engages us, as well as for that of all the phenomena of observation, nothing, besides, can replace personal practice, whether we have in view that which promotes at the same time the education of the mind and the intelligence, a double education so laborious, and therefore so often neglected or unfinished.

"Be this as it may, since our attention has been directed to the exploration of the valvular action, by the method of palpation, we have had ample opportunity to ascertain, appreciate and determine exactly the modifications which the movements present, when thus perceived in the principal valvular lesions, and to apply these modifications in the diagnosis of these lesions. Every day, in our clinique, we have been able to announce the condition of the valves, after the application of the hand on the region of the heart, and afterwards to confirm this diagnosis by means of the signs furnished by other modes of exploration."

a. The method of examination by *touch* or *palpation* is familiar to all diagnosticians, and is successfully employed by many in determining several conditions or variations of the heart's action, as well as other physical phenomena exhibited in abnormal states of the thoracic and abdominal viscera. In *hypertrophy* of the heart for instance, it is essentially useful; although not so stated in the text, this disease is probably indicated, or intended so to be, by the enumeration of the characters given.

b. In connection with this point, the following remarks by Dr. Stokes, contained in his recent work on Diseases of the Heart, are extremely valuable and full of interest. In treating of *Pericarditis*, he says:

"Phenomena discoverable by touch. When the hand is applied over the region of the inflamed organ, sensations as of two surfaces rubbing and grating one on the other are often perceptible. They imply that the lymph is in a state of unusual consistence or hardness, and probably also that the surface is but little bedewed with serosity. And hence, as might be expected, they are generally better developed during the earlier periods of the disease than when, after the absorption of the serous part of the effusion, and under the process of cure, the surfaces again come into contact.

"Among the conditions which favor the production of friction signs per-

ceptible by the hand, the resisting nature of the organ covered by the inflamed membrane occupies a prominent place; and it is probable that the greater frequency of these signs in pericarditis, rather than in pleuritis, is referable to the unyielding nature of the structure of the heart, as compared with that of the lung. Whoever has once grasped the living heart of an animal, can understand what a hard and solid mass it presents during the systole. We further find that in the case of *peritoneal* friction, the sign has been principally observed where the inflamed membrane invests some organic tumour or solid viscus. Can we then explain the rarity of the tactile friction signs in the advanced and resolutive stages of pericarditis, by supposing a weakened state of the heart, which interferes with the vigour of its contractions, and renders it, during the systole, less hard and resisting?"

Although in the announcement contained in the foregoing article from M. Racle's work, there is no very detailed statement given of the extent of the value of the several indications afforded by this mode of examination, enough is said to guide an intelligent observer in constructing a scale of phenomena for himself, in determining the amount of valvular disease as well as its special forms. As a corroborative method of diagnosis, it possesses great advantages and opens up a large and interesting field of investigation to the pathologist. Nor is it without peculiar claims to our consideration, in those cases in which the formality of a stethescopic examination becomes irksome or alarming to a patient labouring under heart disease; at all times they are anxious, nervous and easily excited, sometimes prejudicially so, particularly when suspicions may have been awakened that the special form of disease with which they are afflicted is incurable.

In such cases a preparatory examination by touch may pave the way to the more formidable or repugnant auricular and stethescopic exploration, or may, if we acquire by practice the dexterity professed by M. Bouillaud, altogether supercede the necessity of the latter.

Unquestionably the hand will require as much and even more education than the ear; and with those in whom the sensitiveness of the hand is impaired, the appreciation of the delicacy of the phenomena will be very difficult and unsatisfactory. But the latter objection obtains in some instances to the stethescope; I have seen many physicians who have failed to recognise or distinguish the distinctive characterics of cardiac and pulmonic sounds.

I venture to suggest that some little tact is necessary in the mode of conducting this examination; it being a matter of no small importance to attend to the position of the patient; the part of the hand to be employed the point of touch, and even the choice of hand.

The position of the patient. This should be in the erect posture; standing if practicable as being generally more convenient to the observer. The body should be slightly inclined forwards, so as to lean somewhat on the examiner's hand. If from debility, or other preventing circumstances, the erect position is insupportable

or inconvenient, then the examination being necessarily conducted with the body recumbent, the prone posture should be assumed, the examinator slipping the hand under the chest.

The part of the hand to be employed. To those who possess the advantage of a soft and sensitive hand, this will not be a matter of much moment, any portion of the palmar aspect will answer equally well; but to those not so fortunately endowed, it may become necessary to select points of contact. It will be found that on extending the fingers, moderately separated from each other, and placing the palm of the hand in proper position, that the prominent masses of muscles connected with the thumb and lying along the outer margin of the palm, will naturally fall on the two points where the impulse of the base and the apex are most distinctly perceived, and thus it will be clearly defined. With some it may be preferable to use the fingers; the index and middle one will perhaps be the most convenient, but they are by no means so useful for the purpose as the whole palm. It may even be advisable to use the left in preference to the right hand, the integuments on the former being generally softer and more sensitive. According to the hand selected, the examinator's position in relation to the patient, must be on the right or left side.

The points of touch. To determine these with precision, is a point of much importance to the success of this method of examination, and not only requires us to be familiar with the normal relations of the heart to the thoracic parietes, but to bear in mind that these relations are liable to frequent alterations by disease. I may therefore be permitted to recite the former, and briefly allude to some of the latter, as prefatory to indicating the best points of touch.

The heart, then, is placed behind the left half of the sternum and the sternal attachments of the superior ribs. The *base* of the heart, the seat of the second impulse, lies partly under the sternum, nearly on a level with the superior margin of the sterno-costal articulation of the second rib, on the left side extending under the cartilage of this rib and reaching slightly below it. The axis of the heart is somewhat diagonal; the apex is found in the fourth intercostal space, just under the fourth rib. It bears the same relations to the nipple of the mamma in males and females, provided that if the latter is not too large, or displaced from its normal seat. A vertical line dropped from the nipple, will pass over the spot occupied by the apex. The distance from the nipple to this spot will vary according to the height of the individual. Here it is that we shall define most clearly the stroke of the apex against the thoracic parietes. The superior or left border of the heart will be found to pass on the inside of the nipple from the inferior border of the second rib to the fourth, where it terminates in the apex. The inferior or right border is partly under the sternum, and partly free, lies in contact with the liver and transverse colon, the diaphragm being interposed.

From this description it will be inferred that we should seek for the phenomena of the second impulse at the seat of the base and of the ventriculo-arterial valves, or at the articulation of the second or third costal cartilages, for those of the first impulse between the inferior extremity of the sternum and the apex, or even at the epigastrium. The intimate relations subsisting between the diaphragm and posterior surface of the heart render the sounds and impulses at the auriculo-ventricular valves more appreciable here.

The heart may be misplaced congenitally, or by disease or its results. Effusion in the left pleural cavity pushing it towards the right side. Enlargement of the liver pushing up the apex, etc.—It will be necessary to ascertain the existence of these or similar displacing causes, and to search diligently for the abnormal position of the tactile phenomena.—[*American Medical Monthly.*

Prize Essay Read before the State Medical Society, on Difficult Labors and their Treatment. By M. B. WRIGHT, M. D,, of Cincinnati.

"True things instead of pleasant things."

The eagerness with which the professional mind has engaged in its search after undiscovered truth, or in its efforts to revive rejected opinions, has given it often a proclivity to extremes. These extremes, like opposite promontories of a great continent, are of little exclusive value. Their importance consists in the facilities and inducements they may have offered, for the exploration and cultivation of the space which lies between.

These remarks apply, not only to the Science of Medicine in general, but to its obstetrical department. General principles have been established as lights for our guidance, and the successful application of many has stamped them with a true value, but errors in practice were introduced at an early period, and have descended in almost every obstetrical work of which we have any knowledge. Our object in writing this Essay is to aid in the correction of some of these errors.

The least appearance of opposition to the announced opinions of distinguished Medical men, and the practice of their numerous followers, may give rise to the charge of presumption. But encouragement is given in the outset of our present undertaking, by the reflection, that truth contains as much intrinsic value expressed by those trudging along the humbler walks of the profession, as when inculcated by the Professor in his chair, or transferred from page to page throughout a long line of standard publications.

It will be admitted by those who have had a full share of experience in the treatment of difficult labors, that a few absolute rules cannot be applied successfully to every case. Much is necessarily left to the judgment and tact of the practitioner. While, therefore, nothing will be found in this paper of an arbitrary character, there will be an independent attempt to correct errors, to

lessen the perplexities of the accoucheur, to mitigate suffering, and to save life.

A ready and successful management of difficult labors pre-supposes an intimate knowledge of those which are natural. And if by natural labors are understood those which terminate spontaneously, and without involving necessarily the safety of either mother or child, shoulder presentations may be considered the true type of unnatural or difficult labors, for they almost always demand extrinsic aid.

The satisfactory termination of difficult labors depends upon the correct adaptation of art to the principles of science. Traction is a mechanical act, but to be successful in delivery, it must be made in conformity with scientific details, with due regard to the relation of organs and tissues. The convex surface of the fœtus is correlative with the concave surface of the uterus. If they were inanimate, rigid bodies, the relations of their several parts could not be much changed unless the curved lines of the one, were moved along the curved lines of the other. Their partial flexibility does not exempt them from the operation of the same principle.

The uterus undergoing gradual distention by the growth of the fœtus, and by increase in the quantity of liquor amnii, is not from this cause alone excited to an expulsion of its contents. Let a strong and sudden mechanical force be applied to the fibres of the uterus, even to a limited extent, and contraction will speedily follow. If any portion of the fœtus should be pushed forcibly against the fundus of the uterus, by attempts to rectify a malpresentation, a more than corresponding resistance would soon apprise us of a want of adroitness, and the probabilities of failure. The hand of the manipulator in the vagina, imparts a sense of fulness, and induces expulsive efforts on the part of the mother. Pressure on the internal face of the perineum, or along the recto-vaginal septum, urges the uterus to renewed or more energetic action. Simple contact of the uterine and fœtal surfaces in turning, does not produce undue contraction of the uterine walls. The presence of the hand, added to that of the fœtus, within the uterus, is a common cause of irritation and expulsive force. But the fact which we most desire to enforce here, is, that when the fœtus, in the operation of turning, is moved in straight lines, and sensibly displaces the uterine fibres with which it comes in contact, it is speedily forced back to its orignal malposition; nor can its displacement be easily rectified, except it be moved in conformity to the curvatures of the cavity in which it is contained.

Difficult labor, arising from the presence of either the right or left shoulder of the fœtus, at the brim of the pelvis, is not common. Indeed, some prominent obstetricians know nothing of it from experience. He who refuses to examine its nature carefully, however, on this account, will find in the hour of trial, that he has been untrue to himself, and that the lives of confiding and beloved

ones, are in double peril. Difficult labors, in truth, cannot be successfully managed without a knowledge of their character, not to say the possession of tact derived from experience. Without the one, he cannot exercise the other. In natural, a want of knowledge would be more excusable than in unnatural cases. The former may terminate favorably, in the midst of *inactive* ignorance; the latter *require action*, guided by an enlightened judgment. A man may justly congratulate himself that he has never been entrusted with the management of a difficult case of labor, but he should not cherish the belief, on this account, that his next case will not require special interference. With the present knowledge of the profession, it is impossible to determine the nature of a presentation from external appearance, or from the feelings of the pregnant woman. And it is hardly to be presumed, that a physician will examine all his patients during the progress of gestation, with a view to ascertain the kind of presentation he is to meet; admitting, that in some cases, the position of the fœtus may be ascertained by manipulation through the walls of the abdomen, and by vaginal touch. Hence, the importance of being prepared to treat every case that may occur, in the best possible manner.

It has been claimed, that nature is adequate to the accomplishment of her own wise designs, and that shoulder presentations may be left with safety to the spontaneous action of the uterus. None, among the controlling spirits of our profession, have enforced this doctrine more strongly than Denman. He contended that by the alternate contractions of the uterus, the shoulder was moved from its position, until the head or breach occupied its place and became the fixed presentation. It may be admitted, indeed, we know, that the shoulder has receded, and the breech has subsequently presented in one case, and the head in the other. Hence the language of Dr. Denman—"spontaneous evolution of the fœtus"—may still be retained.

At a subsequent period, Dr. Douglass, of Dublin, gave a different explanation of the manner in which spontaneous delivery was accomplished in shoulder presentation. The accuracy of his views have been acknowledged by more recent writers, who have had opportunities for observation.

Dr. Churchill says, "the head and the shoulder depressed in the pelvis, are fixed, and the remainder of the body doubled up, is inch by inch forced into the pelvis, and through the external parts, until all below the arm is expelled, leaving the case to terminate as a breech or foot presentation. At no part of the process is the arm at all retracted; but if moved at all, it is still further protruded; the name of "spontaneous expulsion," given by Dr. Douglass, is therefore more suitable than that of "spontaneous evolution." Still, the question is not, whether spontaneous delivery is accomplished in these cases by "evolution," or "expulsion," but whether the physician should stand idle and hope for delivery by the long continued agonies of his patient.

By reading the following quotation, some faint idea may be formed of the intense and protracted suffering to which a woman is suject, during "spontaneous expulsion," at full term.

"Immediately after the rupture of the membranes, the parts diminish in size by the compression they undergo. The first period is the analogue of flexion in the presentation of the vertex, of extension in that of the face, and of the lessening of the parts in the presentation of the pelvic extremity. Then the shoulder descends gradually, and, in proportion as it enters the excavation, it executes a movement of rotation, which places the head on the horizontal branch of the left pubis, and thence under the pubic arcade. After this movement the arm disengages, and passes out of the vulva; sometimes the expulsion of the arm takes place before this period. When the rotation is performed, the period of the descent of the trunk is complete; the side of the fœtus is pushed into the excavation by gliding on the right sacro-iliac symphysis, while the shoulder remains immovable. After the side, the pelvic extremity descends, which also pursues the same direction. Finally, the perineum distends, and then successively pass out at the anterior commissure of the perineum, the lateral and superior portion of the chest, the side properly so called, the hip and pelvic extremity. In proportion as these parts are delivered, the head and left arm enter the excavation, but they are soon expelled, and, in most cases, the head does not undergo its movement of internal rotation. In a word, it presents at parts which have been excessively dilated, and it is not solicited by them to perform this movement of rotation. Such is the course pursued, when the dorsal surface of the fœtus corresponds to the surface of the pelvis."

Not only does a labor of this description require unparalleled voluntary efforts—not only does it involve extreme suffering of body and mind, but many patients have died before, or soon after delivery; and, alas, too many of those who may have survived, have found themselves entailed with incurable injury, or enfeebled general health.

This is not all. According to M. Velpeau, only twelve children were alive after "spontaneous expulsion," out of one hundred and thirty-seven labors.

It is almost certain from the statements of those in whose judgment we are bound to confide, that spontaneous expulsion cannot take place, even with the hazards already enumerated, except in cases where the fœtus is small, or the pelvis unusually capacious.

That a fœtus of full size may pass through the pelvis, the shoulder or side continuing as the presenting portion, without necessary injury to the mother, is proven by the painful details of the following case:

The patient was a young German woman, in labor for the first time. A shoulder presentation was detected at an early period by the midwife, first called in attendance, who, with uncommon

prudence and forethought, suggested the necessity of an accoucheur more experienced and skillful than herself. A messenger was speedily despatched for a physician of their choice, who, soon after placing himself at the bedside of the patient, decided that the arm which had prolapsed was a leg. To expedite delivery, the arm was seized, and was made to sustain for a considerable time strong traction. Sufficient force, however, could not be applied by means of the naked hand to withdraw the child. A towel was interposed, and after repeated efforts and renewed energies, the arm, together with the clavicle and scapula, were torn from their attachments. This, to those present, was a new mode of proceeding, and not being exactly in accordance with their feelings or judgment, the doctor was requested to withdraw.

The physician next called, finding an unpromising state of affairs, invited us to share with him the responsibilities of the case. On our arrival at the house, we were informed that the fœtus had been expelled by spontaneous action. The midwife, who used her eyes as well as her hands, assured us, that one shoulder, and so much of the other as had been left, were born first and at the same time, and that the head and breech escaped also together. From an examination of the child, it seemed highly probable that the statements of the midwife were correct. As the pulling at the arm was increased, the shoulder descended more and more; and the neck of the child was stretched until the face reached the pelvis, and was compressed in the integuments between the crests of the ilia. There it remained imbedded, until our examination of it had been made. The child could not have weighed less than eight or nine pounds. The mother lived, and, as we understand, her convalescence was not protracted. We are informed by Dr. Dewees, that "spontaneous evolution" had never occurred in his practice, and yet, he says, "I should, therefore, recommend waiting for this 'spontaneous evolution,' whenever turning forbade the hope of saving the child, provided the labor be not complicated by either of the accidents enumerated."

To us, the lesson of Dewees is far from being satisfactory on this subject. Notice the language—"whenever turning forbade the hope of saving the child." Are we to allow the woman to suffer on and on, not because turning is difficult or impracticable, but because the child is dead? We cannot suppose this to have been the meaning of so distinguished a practitioner; for if it has become a settled doctrine, that the claims of the mother are paramount to those of the child, when both are alive, how much stronger are these claims when the latter is certainly dead.

Perhaps Dr. Dewees entertained, to their full extent, the views entertained by Denman, viz: that the shoulder receded from the brim of the pelvis, and that in time the head or breech assumed its place. Suppose he did believe in this change of position and presentation, it was simply a belief in a possibility. If a case had never occurred in the practice of a man of such unlimited experi-

ence, what just ground had he to hope that one would soon be presented? Would any other man be sustained in waiting thus, as a compliment to the doctrine of Denman? While we admit, with both these distinguished teachers, that "meddlesome midwifery is bad," we greatly fear that tardy action has been followed by a large amount of evil.

Diagnosis.—At an early period of labor, the signs of shoulder presentation are somewhat negative. The membranes may be felt within the os uteri, but even when relaxed and admitting considerable pressure, the finger can detect nothing beyond. By and by, the os undergoing gradual expansion, the membranes protrude into the vagina. Our suspicions of a mal-presentation are increased; for, instead of feeling a broad surface of membranes, and through them, a large, round unresisting body, they are in the shape of a loose, elongated bag. At length the os tincæ is fully dilated, but the presentation is no less obscure. Up to the present period, however, all this may frequently be said of the breech presentations, and occasionally those of the head.

The contractions of the uterus occasion a descent of the presentation, until it can be felt at the superior strait. Now the mind is led to ask and answer questions. Is this the vertex? No. It is not hard enough, it has not sufficient circumference, nor has it sutures nor fontanels. Is it the breech? No. There is something that feels like the tuberosity of the ischium; there is no fissure, there are no genital organs. Is it a foot? No. There are no short toes—no malleoli; there is no heel. It cannot be the hand, for it is without long fingers, and there is absence of wrist, or well defined palm. Is it not the face? If it is, there is neither chin, mouth, nose, eyes, forehead. We will not say anything about the elbow, for if that be near, the shoulder cannot be far off. It must be the shoulder. The shape and size would so indicate—extending the finger upwards, either towards the pubis or sacrum, the axilla may be felt; on one side the clavicle is detected, on the other, the scapula, and during the exploration, the ribs and intercostal spaces will assist in the diagnosis.

These several parts are indistinct, while the membranes remain unruptured. After their rupture, the presentation descends and is more readily made out. At this time, also, the arm may be moved, which will strengthen our opinion still more. When the arm falls into the vagina, as it may by sudden rupture of the membranes under uterine contraction, or during an examination, there should not be left upon the mind a single doubt. It is true, the arm has been mistaken for a leg, and great mischief has been the result, but a careful examination of the hand will prevent errors of judgment on this point.

Great care has been enjoined upon us in our examination, lest the arm should be made to descend into the vagina, and prove an obstacle to successful turning. We regard it so little in the way, and so much under our control, that we have not hesitated in a

case of doubtful presentation, to draw it down from the superior strait, and use it as a means of more certain diagnosis.

Causes.—Any attempt at a solution of the cause of shoulder presentation, would result in a mere waste of time. At best, we could arrive at nothing but conjecture, and our object in writing this paper is to present our views in as practical a form as possible. We may venture in passing, however, a few suggestions.

Among the several conditions to which shoulder presentations have been attributed, are the small size of the fœtus, a large accumulation of amniotic fluid, uterine obliquities, pelvic obliquity, long continued agitation of the body, sudden shocks, violent mental emotion, partial contraction of the uterine fibres. Most of these so-called causes are daily witnessed, and yet how rare are shoulder pretentations.

At this point, we are inclined to adopt the language of Cazeaux, which is: "If we might be permitted to hazard an opinion, after so many others, we should unhesitatingly say, they have erred by seeking only in the fœtus, its form and structure, for the causes of those various positions, exhibited by it in the internal cavity." To engage earnestly in an examination respecting the cause of position of the fœtus, we should deem it necessary to embrace both the uterus and its contents.

When the ovum enters the uterine cavity, it is liable to be moulded to the shape of the cavity, (speaking mechanically) rather than to expand the uterus. From this moment, (if not before) the prominent functions of the uterus, are those of growth and development; the fundus, and that portion of the body nearest to it, remaining, as in the unimpregnated state, larger than the neck and inferior portion of the body. This is not to be attributed to a natural tendency in the uterus to uniform expansion only, but to the fact that the placenta is in the upper portion of the cavity, and demands that the cavity should be here more expanded, than where its contents are less.

The embryo is, at the same time, becoming more and more developed. During the first few weeks it is suspended in the liquor amnii by means of the umbilical chord. At this period, the cephalic extremity being heavier than the pelvic, (however much we may agree with M. Dubois when the *fœtus* had become fully developed,) is most dependent, and until it reaches the bottom of the membranes, is subject to the laws of gravity. Afterwards, the uterus will be found to have adapted itself, in all its diameters, to those of the *fœtus*, which the *embryo* has now become.

We see, then, how the vertex becomes *naturally* the presentation, and it is easy to admit that Madame Boivin had 19,810 vertex, out of 20,517 presentations, that Madame Lachapelle observed the same 14,677 times in 15,652 cases, that Dr. Jos. Clarke had 10,387 cases, and out of this number, 9,746 with the head in advance, and that Collin's record is correct in giving 15,912 head presentations, in 16,414 labors.

Vertex presentations, therefore, may be justly considered as in accordance with a general law, and all others as violations of this law, just as placenta previa is a departure from the physiological principle, that the placenta should be attached near the uterine extremity of the fallopian tube, and just as utero-gestation is sometimes earlier, sometimes later than the natural period of 280 days.

In shoulder, and in breech presentations, the transverse is often so much longer than the vertical diameter of the uterus, that it is visible, and gives rise to the exclamation, in respect to the woman, what a singular and ugly shape she has! May not shoulder presentations be owing to an early and too rapid expansion of the neck of the uterus, giving to the fœtus much room for motion, and subjecting it to influences, which in more natural cases, would have no effect in changing its position?

In considering shoulder presentations, even to a limited extent, several questions very naturally arise.

1. In what manner can a change of presentation be accomplished most easily and successfully?
2. What mode of proceeding will prove most favorable for the mother?
3. How may the life of the child be best preserved?
4. Can any mode of delivery be relied on exclusively?

Two modes of delivery, besides those to which we have already alluded, have been described by obstetrical writers, viz: *podalic version*, or turning by the feet, and *cephalic version*, or turning by the head. Strictly speaking, however, cephalic *version* is not performed, i. e. if *version* and *turning* be considered as they generally are, synonymous terms. When to expedite labor, we substitute the head for the shoulder, we simply remove one part, that the other may occupy its place. And we should not allow the sudden impression of a name, to direct our minds into an improper course of proceeding, or we may say, into an attempt to accomplish that which is impossible. Podalic version on the contrary, is not only a change of the presenting part, for the feet, but the actual turning of the head, most of an entire circle.

We shall endeavor to answer these questions in the order presented. The first question embraces the general principles of turning, and may be considered the foundation of the whole subject before us. It would afford us much pleasure and cause for exultation, if we could refer to American authorities for full and correct views upon turning, connected with shoulder presentations. For a moment, however, we must bring them before us.

In "Dewees' Midwifery" we find no instructions upon the management of shoulder presentation by cephalic version.

After giving a short quotation from one of the early authors, Prof. Meigs remarks: "It may be that those old practitioners of the days of Queen Elizabeth may have sometimes succeeded by pushing up the presenting shoulder, in getting the head at last to come

to the strait again, but such an event appears to me in any case most improbable."

Professor Huston, in a note, to be found in "Churchill's System of Midwifery," says: "The practitioner will experience great difficulty, and most likely fail in attempting to bring down the head in a favorable position when the shoulder presents. I am satisfied from considerable experience that when the arm, shoulder, breast, back or side is the presenting part, it is better to bring down the feet at once, while the condition of the uterus is favorable for turning than to waste time in attempting to restore the head."

Professor Bedford, who had been induced to translate and edit "Dr. Chailly's Treatise on Midwifery," is silent upon the subject of cephalic version in shoulder presentations.

Professor Miller uses the following language: "Cephalic version has but few advocates at the present day, and is confessedly applicable to such a limited number of cases that it is scarcely worthy of our formal consideration. For this reason, and because I have no experience of it, I shall confine my observations to pelvic version. Again, it is manifest that all attempts forcibly to pass the hand between a powerfully contracted uterus, and the fœtus, must be extremely painful and may cause fatal rupture of the organ. The only resort is mutilation of the child, either by eviscerating its trunk, to enable the operator to extract it doubled upon itself, in imitation of the natural process of duplication, or by decapitating it in order that the body and head may be separately extracted."

We hope to satisfy those who may follow us to the end of our paper, that evisceration is not the sad alternative to which we must resort in those cases in which podalic version is impracticable. Some attention, however, must be given to those European authors, whose opinions and teachings are now before us.

To facilitate turning by the feet, Dr. Churchill recommends the use of the lancet, tart. antimony, and opium. He then adds, "should these measures fail, and version be impracticable, we must open the chest of the child, and eviscerate, after which it may be extracted by the crotchet."

Three modes of turning are given by Dr. Ramsbotham, viz: by the feet, the breech and the head. In transverse presentations, he claims "of these three modes, that of raising the shoulder and bringing down the head would be the safest for the child, because there would then be little chance of pressure on the funis umbilicalis, and it is that pressure which usually destroys the fœtus, when extracted by the breech or the feet, but although safest for the child, it is the most dangerous to the mother, as well as most difficult to the operator, and the danger, as might be expected, is in proportion to the difficulty." "And in these attempts," speaking of the several steps in turning, "which will most likely require to be repeated, both the *uterus* and *vagina* would be seriously endangered."

If Ramsbotham expressed these views from experience, his manipulations must have been singularly defective. How a change of presentation from the shoulder to the head, accomplished as it can be, by a force scarcely appreciated by the patient, is to endanger both the uterus and vagina, is to my mind past comprehension.

The opinions of Velpeau are expressed in these words: "Cephalic version may therefore be attempted. 1st. In a well-formed pelvis, where no other accident has happened except a vicious position of the fœtus, and the head is found in an inclined position in the vicinity of the strait. 2d. In presentations of the shoulder, back or anterior part of the thorax, *provided the arm is not prolapsed*, and the uterus not too much contracted. Lastly, it seems prudent to try it whenever the feet are further removed from the strait than the head is, and where it is probable the labor would terminate spontaneously if the head were at the strait." These views refer to the method adopted by the early obstetrical writers, of performing cephalic version by manipulations, in part, through the walls of the abdomen.

Speaking of the same kind of cephalic version, Chailly admits "that the delivery will be as happy for the infant and mother as if the vertex had orignally presented." "After the rupture of the membranes," he continues, "we must not think of *cephalic version;* pelvic version is the only resource." Again, "after the rupture of the membranes, this operation should be resorted to only *when the pelvis is deformed.*"

A few words in passing as a commentary on the above paragraph. If a change of presentation is safer for mother and child before the membranes are ruptured, why not afterwards? provided undue violence be not employed in effecting the changes. *Violence* would be as likely to destroy the child, as well in podalic as in cephalic version. And if the latter can be performed easily and advantageously when the pelvis is contracted, how can we reason against it, when no obstacle interposes to the ready use of the hand in changing the presenting portion of the fœtus?

We have thus given a hasty outline of the views entertained by a few obstetrical writers on the subject of turning in shoulder presentation. How far our own experience, which will now be given, is in accordance with the above, others are at liberty to determine.

Some years since, we had under our care, at different periods, two cases of shoulder presentation. In one of these cases, the membranes gave way under the action of the uterus, before the os-tincæ was fully dilated. As the liquor amnii escaped, the shoulder descended so as to be easily felt. Being in the country, and too far to obtain medical advice within a safe period, we determined upon speedy delivery by the feet. The os tincæ soon became sufficiently dilated to admit the necessary manipulations, and while passing my hand above the superior strait, the shoulder moved upwards, as if to change its location. A young man, with

little experience in turning, but with sufficient knowledge of its difficulties to occasion a dread of its necessity, can appreciate the feelings of the moment, and how willingly the suggestions of nature were adopted. The movements of the fœtus were facilited, by acting first upon the shoulder, then upon the head; and after the latter had been properly adjusted, and had become fairly engaged in the superior strait, the labor progressed and terminated favorably without further interference.

In the second case, the os-uteri became gradually expanded to its full size, with the membranes uninjured. Pressure upon them with a view to reach the obscure presentation, and a strong contraction of the uterus at the moment, occasioned their rupture. Speedily the shoulder came to the superior strait, and being easily moved as in the above case, was similarly managed.

In both these cases cephalic version was more expeditiously performed, than in the most favorable cases of turning by the feet, that had fallen under our notice. Recently a case occurred in our own practice, but as it resembles so closely the above, it is not deemed necessary to enter into particulars. Cases reported by others, will doubtless be received as more conclusive testimony.

[To be concluded in March number.]

New Method of inducing Premature Delivery.

Dr. Scanzoni was induced, by observing the active sympathy between the breasts and the other parts of the sexual apparatus, to try to produce premature delivery by irritating the nerves of the mammary glands. The first experiment was made upon a young woman, aged 24, who, two years ago, had been delivered by perforation, in consequence of contraction of the pelvis. In the thirty-second week of utero-gestation, apparatus constructed of caoutchouc, forming sucking-pumps, were put upon the nipples. During three days they were used about seven times, the process going on upon each occasion for two hours. After the third application, the neck of the uterus became shortened; after the sixth, severe labor-pains came on; after the seventh, the child was born.

The only danger likely to ensue from this very simple method of treatment is inflammation of the mammæ; this can be met with proper treatment.

A second case, of similar kind, occurred to the author. A young woman, *enceinte* for the first time, suffered so severely from dyspnœa, connected with organic disease of the chest, that premature delivery was necessary for the preservation of her life. After the third application of the sucking-pumps, an apparently dead child was born; respiration, however, was soon re-established. The author remarks that this case is not quite conclusive, because premature delivery occurs often in connection with severe dyspnœa, independent of other influences.—[*Med. Times and Gazette*, from *Verhandl. der Med. Phys. Ges. zu Würtzburg.*

Advantages of operation in certain cases of Hare-lip at a very early age. By HENRY SMITH, ESQ.

It is obvious in the first place, that an infant with hare-lip cannot so readily take in that nourishment which is offered by nature. If, however, the deformity be remedied, the child will be placed by the aid of surgery in a much more favorable condition to receive the nutriment afforded by the mother's breast. It is plain, too, that the deformity excites most unpleasing and painful sensation in the mind of the mother and those around her; and, if the source of this anxiety can be removed at once, it is of great importance that it should be accomplished.

A third argument in favor of very early operation for hare-lip consists in the circumstance, that as the growth of the child is very rapid in the first period of life, the lip, with other structures of the body at this time, becomes more fully and fully developed, and thus, after an operation has been successfully performed, there will be a much less chance of subsequent deformity in the part. But it is in those instances where the harelip is complicated with a more or less extensive fissure in the palate that an early operation for the cure of the former is so imperatively demanded, and is attended with some beneficial results; and it is to this point especially I wish to draw attention, because, although in some recent works of surgery an operation at an early period after birth is recommended, (and I may especially allude to the *Practical Surgery* of Professor Fergusson, and to the *Surgeon's Vade Mecum*, by Dr. Druitt,) the most important reason for such a proceeding is not alluded to. And I now refer to the effect which is produced upon the fissure in the hard palate by the approximation of the edges of the lip. As long as the hare-lip remains in its primitive state, there can be no pressure upon the hard tissues underneath; but, if it be united by the surgeon, a considerable amount of pressure is exerted upon the edges of the cleft in the palate; and, in a child aged only a few days or weeks, the bones are so soft and compressible, that they are to a great extent influenced by the pressure which constantly obtains, and in the course of time the fissure becomes either entirely closed or diminished in size to one-third or one-fourth of its original extent.

I have had various opportunities of noticing this effect in instances where a very early operation has been performed for hare-lip, complicated with more or less extensive fissure in the hard palate; and so convinced am I of the importance of performing the operation as soon after birth as possible, that I invariably recommend it. And it has fallen to my lot to be called upon to perform the operation very soon after birth, where there has been, at the same time with the hare-lip considerable malformation of the palate; and I have been able to notice the result some length of time afterwards. More than three years ago I operated upon an infant only four days old; here there was an extensive fissure

extending through the hard palate into the nostril. I had an opportunity of seeing this child only a few days since, and the opening in the front portion of the palate was closed up. In this case the soft palate was extensively cleft, and that still remains open; but the parts altogether are in such a condition that, some years hence, they may be completely closed by staphyloraphy. A few weeks since, a little patient was brought to me, on whom I operated at a very early age, two years ago. In this instance there was a fissure in the hard palate, and great deformity of the jaw, a portion of which I removed at the time. There is now an admirably developed upper lip, and complete closure of the opening which exists in the palate. In another instance, where I operated at an early period, there was an immense chasm running through both soft and hard palate into the nostril. I had an opportunity of seeing this patient a few days since, and found that the anterior portion of the cleft was much diminished in size. The operation was done more than a year ago.

Mr. Bateman, of Islington, who pays great attention to this matter, operated, three years since, upon an infant only four hours after birth. In this case there was an extensive fissure in the palate. This gentleman kindly showed me this case, and, in reply to my inquiry regarding the effect which the operation had had upon the palate, he wrote word the other day that the child had died of hooping-cough last winter, but that its mother remarked that before death the fissure, which had at birth been 'so large that she could put her thumb into it, had contracted so much that it would scarcely admit the edge of a sheet of writing paper.' About a month since I operated upon an infant only six days old, with perfect success. In this case I was partly induced to perform the operation at this early period because there was a fissure in the hard palate, extending into the nostril. I have little doubt that, in time, if the child lives, the fissure will be completely closed.

[*Med. Times and Gaz.*

Topical Uses of Iodine.

The value of iodine as a counter-irritant is year by year becoming more generally appreciated, and is yet much less so than it deserves. The iodine solution will probably, before long, entirely supersede mustard plasters, being at once more efficient, and much less disagreeable in its employment. The following notes on its applications will, perhaps, not be useless; they are the results of very extended observations in the hospitals generally, but more especially in those devoted to the treatment of diseases of the chest:—

1st. In the pleuritic stitches, or aching pains in the chest, so commonly recurrent in the course of phthisis, the iodine paint, applied over the affected spot, usually affords, without any expense to the vital powers, much more relief than either leeches, sinapisms

or blisters. It may be used in almost all conditions of the system with perfect safety.

2nd. In cases of aphonia or hoarseness, depending on inflammatory thickening of the parts concerned in the production of voice, great benefit may be derived from painting the iodine over the front of the throat externally.

3rd. If the mucous lining of the fauces, etc., be thickened and congested, the solution may, without risk, be freely applied to the part itself.

4th. In the treatment of chronic enlargement of the tonsil, the application of iodine to the gland itself will sometimes effect a cure, but is much less generally efficient than constitutional treatment.

5th. In cases of chronic pleuritic effusion, or of consolidation of the lung, the solution should be painted over a large extent of the diseased side, and is of great service when the period for blistering or leeching has passed.

6th. Applied extensively over the belly, iodine is a useful counter irritant in the incipient stages of strumous peritonitis.

7th. In strumous ophthalmia, the application of the pharmacopœial tincture to the skin of the lids is often effectual in relieving intolerance of light; much benefit may also be derived from like practice in cases of granular lids. In both instances, frequent repetition is necessary.

8th. In all forms of periostitis, whether syphilitic, strumous, or the result of injury, iodine paint is invaluable.

9th. It is needless, perhaps, to mention the employment of iodine as a local application to bronchocele, to inflamed joints, and to the enlargements of the absorbent glands; with regard to the latter, a point is worthy of being borne in mind, to which Dr. Budd was, we believe, the first to direct attention, viz: the propriety of applying it to the skin beyond, and not over the affected gland, so as to allow of its being absorbed and taken through the gland in the course of the limphatic circulation.

10th. Injections of iodine into the cavities of abscesses, glandular or otherwise, appear most frequently to produce good results, and to be unattended, except in very exceptional instances, by any risk. The theory of their use is, that the adhesive and not suppurative inflammations, as, for instance, in the radical cure of hydrocele.

11th. In cases of contracted cicatrices after burns, in which treatment by extension is adopted, the application of iodine, is of advantage in causing the absorption or softening down of the indurated structure. Some cases Illustrative of this have recently been under care in the Middlesex Hospital. Care must be exercised, or ulceration may be caused.

12th. In cases in which the patient cannot be got to swallow medicine, as now and then happens in phagedæna of the throat, the specific influence of iodine may be induced by its endermic

application, the best method being to paint over large surfaces of the skin the pharmacopœical tincture, choosing a different part each time.

The reason why, as a counter-irritant in all forms of chronic inflammation, iodine appears so superior to other applications, is doubtless to be found in the fact that it is capable of absorption, and may thus act beneficially in two distinct methods.

We have enumerated above some of the chief uses to which the iodine solution is daily put in the practice of the London Hospitals, but do not profess to have mentioned all. These are, however, enough, we think, to prove its right to a place on the dispensing table of every Medical practitioner.—[*Ibid*

Nature and causes of Green Vomiting. By Dr. FRAZER, of Dublin.

The ejection of green-coloured fluids from the stomach is noticed in the course of many abdominal diseases; thus, we meet it during attacks of peritonitis, puerperal fevers, and continued fevers with gastric complications, in strangulation, in intussusception of the bowels, in that rare affection, acute gastritis, and in various enteric inflammations. Its appearance has been attributed by many to the presence of bile in the secretions evacuated during protracted vomiting, and we often find it described as consisting of *green bilious matter*. For various reasons, this explanation did not appear at all satisfactory to me.

I consider this green matter is composed of the blood in an altered and modified condition, the discharge being altogether of a hemorrhagic character. Repeated microscopic observations, in those instances in which I have noticed its occurrence for some time past, has confirmed my ideas regarding its nature, and examination shows that the little fragments of which it consists are various sized clots, containing abundance of blood-globules; this alone might decide the inquiry; however, I am desirous of placing it on other grounds, in addition to such as are afforded by the microscope. I may, therefore, bring forward the following arguments, which further support the view I have taken. 1st. The form of vomiting alluded to occurs in diseases where there is much congestion, and often inflammatory engorgement of the vessels of the stomach or intestines, as in gastritis, and fevers with gastric complications; and after death we find patches of softening in the mucous membrane, or decided marks of excessive vascularity; at least such has been the case in those fatal instances where I have had the opportunity of inspecting the stomach. 2dly. The coincidence of vomiting of ordinary blood, in addition to the green matter, which sometimes occurs; besides, I have remarked that, in many cases of fever which were attended with this peculiar green discharge, hemorrhagic purpuric eruptions were frequently seen. 3dly. We have the physical properties of this substance;

it forms small green clots in the fluid, in addition to tinging it with its peculiar hue, as we might expect blood to do. 4thly. We must consider that a similar green colour occurs in various parts of the body, and under very dissimilar circumstances. This is, perhaps, the most interesting branch of our subject, and one on which medical records afford little information; as instances of this change, we have, among other examples, the peculiar green hue of contusions that are of some standing, and the green colour of the ecchymoses that occur on the extremities in land scurvy, many cases of which were noticed in the hospitals, in the late years of famine. The colour of the great intestine in various cases of fatal dysentery, and of the mucous tissue of the stomach in inflammatory gastric affections. The grass-green appearance of the interior of the bladder, and of the kidneys, after death, in many acute or sub-acute diseases. The well-known greenish tinge often seen in moist gangrenous affections. The colour of the body, as it begins to decay after death. The green hue of coagulable lymph, and of purulent exudations in bad constitutions, and many other similar facts in pathology that might be enumerated, which are as yet unexplained.

If we reject all extraneous considerations from the foregoing class of morbid changes, we have, I conceive, one uniform fact in them all, namely, the presence of blood undergoing some of its mysterious changes; what these are will require additional investigation; but I think we may conclude that the death of the blood is essential—that having lost that vital attraction for oxygen which distinguishes it, and acted on by extraneous sources (probably deoxidizing ones during decay), it becomes changed in its hue.

With regard to its practical bearings, there is much importance in the view now brought forward; it cannot be regarded as a mere theoretic matter, and, therefore, of secondary value, for those green discharges being recognized as hemorrhagic, will go far to account for the collapse, cold extremities, failing circulation, and other alarming symptoms that attend its presence when ejected in any quantity; and with reference to *treatment*, which is the ultimate aim of medical knowledge, we have a rational explanation of the benefit that creasote, ice, and other well-known styptics exert in checking it.—[*Dublin Hospital Gazette.*

Seventeen Cases of Parturition, in which Chloroform was inhaled with Injurious Effects.

The *Medical Times and Gazette*, Sept. 9, contains an account, by Dr. Robert Lee, of seventeen cases of parturition, in which chloroform was inhaled with pernicious effects.

The following is a summary of these cases, with the remarks of the author:—

"In the first and second of these cases, the contractions of the uterus were arrested by the chloroform, and delivery was com-

pleted by craniotomy. Insanity and great disturbance of the functions of the brain followed its use in cases 3, 4, 5, 10, 14, 15, and 16. It became necessary to deliver with the forceps in cases 6, 8, 11, 12, and 13. Dangerous or fatal peritonitis, or phlebitis, ensued after the exhibition of chloroform in cases 7, 8, 11, and 13. Epilepsy followed in case 14, and dangerous fits of syncope in case 17.

Were I to add those cases which the reports of my medical friends have confided to me, and the still greater number which public rumor has brought to my knowledge, I should appal the Society by the amount of mischief which chloroform, given to parturient women, has already inflicted on individuals and families. The details of unfortunate cases, indeed, are generally studiously concealed; but the annals of surgery contain conclusive proofs of the mischievous and dangerous effects of this poison. However much the disasters of operations performed in private may be hushed up, the practice of hospitals cannot be concealed; and we have now a long list of calamitous cases in which the imbibition of a very small quantity of chloroform into the blood was sufficient to extinguish life in individuals of a robust habit and perfectly sound constitution. Were our knowledge of chloroform confined to this fact alone, it would suffice to remove all doubt from the mind of every intelligent practitioner as to its use in midwifery.

It might have been expected that a contemplation of the subtle action of this poison on the nervous system would alone have induced caution in its application to practice, till its influence on the system was more thoroughly understood. But we have been compelled, on the contrary, to witness the most reckless levity.—Very soon after the discovery of its physiological effects, I was confounded by the announcement of its application to midwifery. It was not difficult for me to foresee that such rashness, as it could not then at least have a safe foundation, would lead to deplorable results; and I regret to say, I have not been mistaken. Yet then, as now, we were confidently assured of the perfect innocence of the remedy. The value of the present boasts may be judged of by the past.

It was not wonderful that women, doomed to bring forth their offspring in pain and sorrow, should seek to escape from one of the troubles of our race by means of this treacherous poison, particularly when presented to them with such flattering assurances; neither can we feel surprised that the instances of women who were reported to have been saved from the grievous pains of childbearing, without bad consequences, should have for a time reduced to silence those unwelcome monitors who pointed to the possible evils of this new agent, and induced the honest but enthusiastic pursuers of novelty to turn away their eyes from the contemplation of those dropping cases of disaster which soon showed themselves, and to disturb the general jubilation. But it

does seem to me strange, that, amid so wide-spread an experience as I am convinced now exists of the noxious and dangerous effects of chloroform, it should be necessary for me to assemble the proofs of the havoc it has made. Daily reports, however, convince me that this work is called for; and I have not shrunk from so sacred a duty.

Setting aside the mechanical difficulties of labour, the dangers to which parturient and puerperal women are most exposed may be said to be fourfold: 1, exhaustion; 2, hemorrage; 3, fever and inflammation; and 4, cerebral disturbance. The great cause of flooding is languid or deficient contraction of the uterus. We are assured by many that the contractility of the womb is in no degree diminished by the action of chloroform. But of this important position we have as yet received not a jot of proof; nay, there are innumerable proofs to the contrary. It is expected that we should be satisfied with bare assertion; and, considering that it was made at a very early period, when not a score of women had yet been delivered under the influence of chloroform, and, moreover, that it is made by those who continue, in the face of the most painful contradiction of facts, to affirm the perfect innocence of this poison, we may be permitted to set aside this evidence without further notice. But I rely not upon *à priori* reasoning, but on the direct testimony of my own senses, and maintain, with this unerring guide, that the action of chloroform does very manifestly impede the uterine contractions, and, in some cases, put a stop to them altogether.

The wise and skilful practitioner will hardly require my evidence to satisfy him that so disturbing an agent must add greatly to the risks whish arise from inflammation and fever. But they who doubt will find reason enough, in the cases I have cited, to pause and reflect; while the history here given of severe cerebral affection must surely satisfy the most stolid that all the nervous accidents which attend the puerperal condition, and complicate its risks, must be largely increased by this very active poison.

Much reflection on the physiological effects, and observation of the pathological mischief of chloroform, leave no doubt on my mind that it ought to be altogether expelled from the practice of midwifery. There are no circumstances in which it can be with utility, none in which it can be with safety, employed. I am confirmed in this opinion by conversation with the most discreet and experienced practitioners around me; yet I cannot but entertain grave doubts of the result of my present appeal to the good sense of my profession, when I consider the arts used to propagate a faith in this practice. It has become almost an extra-professional question, while there is a systematic concealment of truth by physicians. Appeals are made by others to the natural timidity of women, and the most fallacious promises of perfect safety are boldly held out. Conceited and ignorant women of fashion make a pastime of this, as of other quackeries, especially the speculum,

and the cause of science and humanity is placed in the hands of the most presumptuous and frivolous part of the community, while young inexperienced mothers are decoyed to their destruction.—It is no unfrequent occurrence that an accoucher should be selected to attend a given woman, but previously told that he must use chloroform. This grave question of medical science has been predetermined by a quorum of old women, instigated, perhaps, by an itinerant duchess. There are men to whom such propositions are not at all insulting. They are quite ready to steal a march on their wiser and more manly brothers, by the adoption of any humiliating fashion. Thus, the health and lives of patients are sacrificed, and medical science is dishonoured.

If I have helped to rescue the medical profession from the dominion of a great and dangerous error, if I have placed some restraint on ignominious and disgraceful practice, I shall rest satisfied that this essay has not been written in vain."—[*Amer. Journ. of Med. Sciences.*

Method of Operating upon Naso-pharyngeal Fibrous Polypi. By M. Nelaton, Hopital des Cliniques.

The true points of origin of these polypi are believed, by the author, to be the inferior surface of the basilar process; the inferior surface of the sphenoid bone, and the internal plates of the pterygoid processes. He states that they never arise from the vertebræ, and that when they descend into the pharynx, their course lies between the muscular and mucous coats.

The complete removal of these tumours is an idea of modern origin. Flaubert of Rouen in 1849 removed the whole maxillary bone of one side for this disease. The same operation has been since performed by Michaux, of Louvain, Maisonneuve of Paris, and Huguiers. M. Mane, a surgeon of Avignon, sometime ago proposed the division of the soft palate, but it was not received with approbation.

M. Nelaton, however, adopts the suggestion of M. Mane, but also advises the division of the bony palate also, thus enabling him to reach more completely the disease. His operation is as follows:

The palatine membrane is first divided and the bony arch exposed. Two openings are then made with a perforator through the bony palate, and Liston's forceps being introduced into the perforations a large portion of bone is removed. The posterior part of the nasal fossæ, the inferior surface of the sphenoid bone, and the basilar process will be then exposed, and the polypus brought well into sight.

The removal of the polypus, under these circumstance, is easy. M. Nelaton drags the tumour, and severs its connection with the knife. He has repeatedly been successful, and certainly his method is preferable, inasmuch as the alveolar border and the teeth are preserved.—[*Moniteur des Hop.*, and *Virginia Med. and Surg. Jour.*

Suture of Tendons. By M. CHASSAIGNAC.

Our readers may recollect a case of successful tenoraphy practiced by Professor Sédillot of Strasbourg, which was reported in a late number of this Journal.* In the *Compte Rendu de la Societé de Chirurgie de Paris*, for April, 1854, we find a second case in which this operation was successfully performed, and which appears to us worthy of being brought to the notice of the profession.

It relates to a girl of sixteen years, who, in Nov. 1853, fell on a piece of broken glass, and received a transverse wound on the anterior aspect of the lower part of the fore-arm, which, after suppurating for a time, cicatrized.

Some months subsequently the patient entered the Hospital St. Antoine with the inability to flex the index finger. It was found that the inferior end of the tendon which had been divided was attached to the cicatrix of the wound already described, and that when this cicatrix was moved, the index finger moved also. On the fourth of February, M. Chassaignac laid bare the flexor tendons, by dissecting a rectangular flap of integument from the fore-arm, and passed a suture through the divided portions of the flexor of the index finger. The flap was then replaced and secured by stitches, and the hand was strongly flexed. In a fortnight the wound had united, and the patient left the hospital with the perfect use of her finger. The ends of the tendon *were not refreshed.* This fact, when considered in connection with Dr. Mayo's case of rupture of the ligament of the patella,† and our observations on tendinous ruptures in the first number of the present volume of this journal, leads to the conclusion that exact apposition is all that is necessary for the re-union of divided tendons, even when separation has existed for a comparatively long period.—[*Virginia Med. and Surg. Journal.*

Case of Strangulated Femoral Hernia, containing Ovary and Fallopian Tube—Operation—Recovery. By WILLARD PARKER, M.D., Prof. of Surgery in the N. Y. Col. of Physicians and Surgeons.

On the 31st of October, 1854, I was called on to visit Miss F—, in consultation with Dr. W.

I obtained the following history of the case: Miss F—, aged 69, had always been in perfect health, except at times she had suffered from dyspepsia, and had been annoyed by a hernia on the right side. This hernia had existed for many years. She had attempted to keep the parts in place by means of a truss, but had failed to accomplish it. The hernia had always been reducible, and she had usually succeeded in replacing the protruded mass. About two years ago, she failed to put the parts back, became sick at the stomach, and called for her family physician; who, after a while, effected a reduction, and she soon became comfortable.

* See Vol. ii, p. 311. † Virginia Med. & Surg. Journal, Vol. i, p. 388.

The patient had now been suffering for three days; she had nausea and vomiting, but without dejections; the abdomen was flat, skin cool, tongue moist, pulse small, 90 beats in a minute. The tumor was hard, the size of an English walnut, and tender at its neck, under Poupart's ligament. Dr. W. stated, that yesterday he put the patient under the full influence of chloroform, and succeeded by firm pressure in reducing the tumor, but no relief was manifested. On moving or making a slight muscular effort, the swelling reappeared. I thought of "reduction *en masse*."

I now tried *taxis*, but failed with the force she would allow me to employ. She was then put into a state of profound anesthesia; and I again made trial of reduction. I could push the whole tumor under Poupart's ligament, but it would seem to bound back. It was now decided to operate. I cut down, and exposed the falciform process of the fascia lata, divided it freely, and then attempted to reduce, without opening the sac, but could not succeed. I could push sac and all up. I proceeded to open the sac: it contained some dark fluid and a small loop of intestine, which was also dark, but not gangrenous. In attempting to explore the neck of the sac with the finger, it receded; and to prevent it from slipping back into the abdomen beyond my reach, I passed a tenaculum into the sac, and gave it in charge of an assistant. The neck was very firm around the strangulated parts, and seemed not more than half an inch in diameter.

I divided it freely, and drew down the intestine that I might understand the condition of it; finding all right, the loop was restored. I found something left behind that was dark, shreddy, and vascular, adherent by a small band to the side of the sac. I saw it was not omentum, and concluded it might be the product of some former inflammation.

I concluded to dissect away the mass; it bled, and I carried a ligature around the whole. When I drew upon the ligature, there came into view the *ovary:* this demonstrated to my mind that the strange portion I had taken away, was the *fimbriated extremity of the fallopian tube.* I pushed back the ovary and the remainder of the tube, brought the parts together by suture, applied the graduated compress with the single spica bandage. The patient was put and kept fully under the influence of morphine. After four days an enema was administered, and the bowels were moved.—A rapid recovery ensued.

In consulting authorities in regard to this anomaly, I find no parallel case; but Dr. G. F. Elliot has furnished me with a case from the Gazette Médicale, for February, 1843, in which the Cæsarean section was performed upon the uterus, occupying a hernial sac. "Patient was 44 years old, mother of seven children, had suffered for many years from a reducible inguinal hernia of right side, which during her previous pregnancies had caused her great annoyance. At the *sixth month* of her eighth pregnancy, the hernia became strangulated, but by emollient and cold applications

it was reduced, followed, however, by severe abdominal pains.—Soon after, the uterus suddenly presented at the inguinal ring, in the hernial sac, forming a tumor of 8 inches in length by 6 in circumference. The patient remained in bed, and went on to the *full term.* Labor commenced, the os dilated, and the waters escaped per vaginam; the tumor at the time being twenty-five inches in circumference by twenty-three in length. The Cæsarean section was then practiced, dividing the sac and uterine wall; the placenta presenting, the operator introduced his hand and delivered a well-formed living infant. Patient died on the third day after, of peritonitis or hemorrhage. On postmortem, there was a large quantity of blood in the abdominal cavity; the inguinal canal was so dilated that the open hand could easily be introduced, and the colon was found detached, and filling the cavity of the sac." The editor of the Gazette severely censures the conduct of the operator in not reducing the uterus when it first escaped, as might have been done; and also in not waiting longer than three hours before performing the section—a complete hysterocele being not incompatible with the spontaneous termination of labor. I find also that Mr. Velpeau, in the second volume of his Traité des Accouchements, mentions a case by M. Saxtorph, in which the uterus at term occupied a femoral hernia, and was spontaneously delivered. In another case by Frank, the uterus protruded through the linea alba. Flamant cites a case complicating umbilical hernia.

[*N. Y. Med. Times.*

The Clamp Suture in Cleft Palate.

We recently witnessed an operation for this affection by Dr. J. Marion Sims, of this city, in which he used this peculiar method of suture. The case was a bad one; articulation very indistinct, and deglutition of fluids frequently attended by regurgitation through the nostrils. The clamp suture, composed of very fine silver wire, fastened to small leaden cross-bars, will remain innocuously in the tissues for an almost indefinite period, which constitutes its great superiority over any other suture. In this case the clamps were removed on the sixth day—the cure was perfect.

This is not, by any means, the first case of the sort in which Dr. Sims has applied this suture with success; and it is our opinion that the operation of staphyloraphy, by this method, will never fail, if properly performed.

It is well known that difficult and tedious labor sometimes results in the most deplorable injuries to the mother: such as laceration of the perineum, bladder, or bowel, and that these affections were wholly incurable till the introduction of the clamp suture by Dr. Sims. It is no wonder, then, that the Profession, both in Europe and America, unite in according to him the highest praise for this great boon to science and to suffering humanity. And now, since he has demonstrated the easy curability of cleft palate

by the same means, we cannot but hail it with delight as another triumph of American Surgery.—[*American Med. Monthly.*

Novel Mode of Opening an Ovarian Cyst.

Dr. Sims, of this city, has recently performed this operation in a mode which is new and which seems to possess several excellencies. A trocar, fifteen inches in length, curved so as to be the arc of a circle of four and a half inches radius, was, with its canula, inserted at the usual place of tapping in abdominal dropsy.—After a portion of the fluid was drawn off, the point of the trocar was drawn within the canula, which, after several attempts, was finally carried to the cul-de sac, between the uterus and rectum; and when felt there by the finger in the vagina, the trocar was again protruded, the sac and the vagina perforated, and the extremity of the canula brought out between the labia majora; thus, in fact, transfixing the patient. A self-retaining catheter was then attached to the canula, and drawn into the ovarian sac, where, being separated from the canula, it was secured within the sac.—The canula was then withdrawn, and the external opening closed. In this way the contents of the cyst were allowed to drain entirely away, and it is hoped that obliteration of the sac and the cure of the patient, will be the result. At our present writing, nearly three weeks after the operation, she is going on well.—[*Ibid.*

Treatment of Albuminuria after Scarlatina.

Formerly it was customary to treat this and all other dropsical affections with diuretics. Prof. Mauthner, however, in the dropsy which occurs after scarlatina, and is accompanied by bloody and albuminous urine, sedulously avoids whatever might overstimulate the kidneys, as likely to cause an acute renal inflammation, or an attack of Bright's disease. He has seen many cases where the swelling increased daily in spite of the administration of squills, digitalis, bitart. potassæ, &c., in which a cure was effected by a simple regulation of the diet. In such cases he advises the exclusive administration of milk, and rice and milk, or at most of decoct. althea, or of decoct. lini sem. By the exclusive use of milk diet, he has seen the action of the kidneys so regulated, that a copious secretion of urine, free from albumen, was established, by means of which the dropsical condition was removed. When the administration of milk fails to effect a cure, he endeavours, by means of alkaline agents, to alter the condition of the urine; and, for this purpose, he prefers using the alkali of the urine itself. He accordingly administers *urea* in small doses (either in the form of pure urea, or of the nitrate of urea), giving generally the third of a grain for a dose, in combination with a little powdered sugar. After six or eight grs. of the urea had thus been taken, he has

frequently seen profuse diuresis occurring, followed by the speedy disappearance of the dropsical affection.—[*Monthly Jour. Med. Sci.*, from *Jour. für Kinderkrankheiten.*

EDITORIAL AND MISCELLANEOUS.

BIBLIOGRAPHICAL.

Manual of Human Microscopical Anatomy. By A. Kolliker, Professor of Anatomy and Physiology in Wurzburg. Translated by Geo. Busk, F.R.S., and Thos. Huxley, F.R.S. Edited with notes and additions, by J. Da Costa, M. D. Illustrated by 313 engravings on wood. Philadelphia: Lippincott, Grambo & Co., 1854. 8vo., pp. 802. (For sale by T. Richards & Son.)

It is really a treat to be placed in possession of Kolliker's histology in plain English. The learned professor's labors in the productive field of microscopy, have made his name familiar to all enlightened men, and the American medical profession should feel grateful to those who have enabled them to become more intimately acquainted with his valuable contributions to knowledge. We know of no book that will be found more interesting to the student.

Transactions of the Illinois State Medical Society, for the year 1854. Chicago.

Although too often resulting in strife, because of their conversion into police tribunals instead of being devoted exclusively to the promotion of scientific emulation, the formation of State Medical Societies has, notwithstanding, been productive of much good. The Transactions of the Illinois Society for 1854, comprising about 110 pages, will be found one of the most creditable productions of the kind. It is true that the work contains only three articles, but they are all papers of decided interest and indicative of a high order of talent. The first is the annual address, by Prof. Daniel Brainard, on the treatment of poisoned wounds by the application of cupping glasses and the infiltration of solutions of iodine. The second is an essay by Dr. E. S. Cooper, entitled "walking rendered the primary element in the cure of deformities of the lower extremities; its early adaptation to white swelling and coxalgia, with apparatus for carrying out the designs of the same." The third is a prize essay on differences in the physiological and pathological action of that class of remedies called stimulants, of which alcohol is the type, and tonics, of which the bitter barks and iron may be considered as specimens, by H. Parker, M. D. We regret that our limits will not allow us to notice these papers at present, but we hope to do so hereafter.

We have also to acknowledge the reception of the Transactions of the College of Physicians of Philadelphia, No. 6 Vol. 2.

A lecture introductory to the course of surgical instruction in the Kentucky School of Medicine, 1854–5, by Prof. Joshua B. Flint.

A brief sketch of the history of Lexington, Ky., and of Transylvania University, delivered as an introductory lecture to the winter course in the medical department of Transylvania University, 6th Nov. 1854, by Rob. Peter, M.D., Professor of Chemistry, &c.

A new plan of treating ununited fracture by means of artificial limbs, which combine the principle of Pressure and motion at the seat of fracture and lead to the formation of an ensheathing callus. Illustrated by the history of 4 cases of false joint in the femur, 8 in the leg, and 2 in the humerus. By Henry H. Smith, M. D., &c., &c.

Elkoplasty, or anaplasty applied to the treatment of old ulcers, (a reply to Dr. Watson's reclamation) by Frank H. Hamilton, M. D., &c.

Atlanta Medical College.—This institution has been reorganized, and proposes to deliver a summer course of Lectures during the ensuing season. The Faculty consists of:—M. G. Slaughter, M. D., Prof. of Anatomy; J. W. Jones, M. D., Prof. of the Principles and Practice of Medicine; Jesse Boring, M. D., Prof. of Obstetrics and Diseases of Women and Children; W. F. Westmoreland, M. D., Prof. of the Principles and Practice of Surgery; J. E. Dubose, M. D., Prof. of Physiology; G. T. Wilburn, M.D., Prof. of Surgical and Pathological Anatomy; J. J. Robertson, M. D., Prof. of Chemistry and Medical Jurisprudence; J. G. Westmoreland, M. D., Prof. of Materia Medica and Therapeutics, and Dean of the Faculty.

Successful Gastrotomy.—The Medical Examiner contains the details of an interesting case of rupture of the uterus, in which the operation of Gastrotomy was successfully performed by Dr. John Neill, of Philadelphia. The child was found lifeless.

The same Journal contains also a Report by W. H. Merinar, of Mississippi, of *two cases of successful Cæsarean section*, which he performed upon the same person in July, 1852, and May, 1854.

Case of Hydrocephalus, in which the Head was tapped Eight Times. By Mr. Brown of Haverfordwest.—A child, six months old, with chronic hydrocephalus, was placed under my care on July 10, 1852. I enclosed the head with straps of adhesive plaster, and persevered in this plan for some time. No good effects were produced. I now proposed tapping, to which the parents consented. Mr. Rowe was called into consultation, and assisted.

August 6th: We removed six ounces of serum. The child became a little sick and faint. 7th: The child was apparently much improved; it looked more intelligent, and took greater notice of the nurse. The head was tightly strapped up. 18th: The head was as large as ever. It was tapped to six ounces, with the same results. September 6th: The head was larger than it had been at all; and it was tapped to eleven ounces,

with the same results as on the previous occasions. 28th: The head was again larger; and twenty ounces of fluid were removed by tapping, with the same results. October 8th: The head was tapped to eleven ounces. 18th: Tapping was performed, and sixteen ounces of fluid were remvved. 25th: Twelve ounces of fluid were withdrawn. 30th: We now abandoned tapping as useless, and inserted a seton of silk through the membranes of the brain, running it along the interior for an inch before bringing it out. No immediate result was produced; but a great quantity of serum flowed from the orifices through which the seton passed. At the end of twelve hours, there was no change. At the end of twenty-four hours, there were vomiting, restlessness, and expressions of pain and distress. In thirty-six hours, there appeared twitching of the muscles and startings, bordering on convulsions. In forty-eight hours from the introduction of the seton, the child refused his food. Moaning and approaching stupor were now observed. The seton was now removed; and these symptoms gave way in a day or two. The head was by this time much decreased in size, and continued so for several days.

We now flattered ourselves with hopes of a cure; but in another day or two, evident signs of secretion manifested themselves, and at the end of twelve days we tapped again, and again the fluid collected. We now gave up all hope, and allowed the disease to take its course. The head attained a frightful size; and the child died.

Examination of the body.—A large washhand basin full of serum was taken out of the brain. The containing sac was formed by the brain, which was completely unfolded, and so stretched, that it was no thicker than the dura mater. This fact, in our opinion, accounted for the failure of the treatment. Had the water been contained in the membranes instead of in the ventricles, there would have been a better chance of success.

I would never hesitate to make similar attempts at a cure, with the hopes of the membranes being the investing envelope of the water. In such cases, a happy termination might be expected.—*Association Med. Jour.*

[The Senior Editor of this Journal tapped the head seven times in a case of Hydrocephalus in 1837, with results similar to the above. In this case a post-mortem examination revealed likewise a complete unfolding of the cerebrum, which constituted the sac containing the fluid. The case was reported in the first series of the Southern Medical and Surgical Journal, p. 440, Vol. i, 1837.]

Treatment of Acne.—The cases of acne at the Hospital for Skin Diseases are usually classified under the heads of A. simplex, A. indurata, and A. rosacea. The latter, in its best marked examples, often occurs without appreciable derangement of the general health, and is extremely intractable. The long-continued use of tonics and alteratives with the local employment of a mercurial wash or ointment, often effects great improvement, but not unfrequently the disease resists all measures. When the red spots are very persistent and disfiguring, they are touched with the solution of the acid nitrate of mercury, a plan by which single tubercles may be got rid of, but which does not prevent others from coming out. It is, therefore, best adapted to those cases in which the individual tubercles are very hard and persistent, fresh crops appearing only at long intervals.

Cases of the two other forms of acne almost invariably yield quickly to treatment. In both, the local measures adopted are the same; any suppurating tubercles are punctured or opened by means of a minute drop of nitric acid. The patient is directed never to wash the face with soap; to be particular to squeeze out any little black points which become visible, and to apply every night to the tubercles a small portion of an ointment of which the chief active ingredient is the ammonio-chloride of mercury, in the proportion of ten grains to the ounce. The constitutional treatment consists in rectifying the cachexia, on which these forms of acne almost always depend. Chalybeates, with aperients, are found the most useful. In the acne simplex, the sulphate of iron, in combination with the sulphate of magnesia and an excess of acid is usually employed; but in the acne indurata the iodide of iron is preferred. In either case the remedy must be continued for several months, but the patient may be promised as a reward for perseverance, that not only will the eruption disappear, but that the general health will be much improved.

The rarity of the simple form of acne in married people, is an observation quite borne out by the experience of this hospital.—[*Medical Times and Gazette.*

Cæsarian Section thrice upon the same woman. By Dr. Barjavel.—In a Jewess, at Carpentras, of scrofulous habit and rachitic appearance, the child presented by the feet at her first confinement. The midwife and two surgeons who attended pulled so hard, that in their efforts at delivery they separated the child's body from the head, which remained alone in the uterus. M. Barjavel (the father of the author) found, when called to the case, the cavity of the pelvis narrowed throughout by exostosis, so that no course remained but the Cæsarian section, which he performed, as usual, in the linea alba. In forty days the wound healed. In spite of the danger to which she exposed herself, she became pregnant again in three years, when the operation was again performed, and a living child was extracted, The mother suckled it, and it is now alive. In four years more she became pregnant a third time, when a young surgeon attempted the same proceeding, but he was not equally fortunate, for the child, a female, was dead, and the mother sank in a few days from hæmorrhage.—[*Rev. Thér. du Midi. Dublin Med. Press.*

Salt as a Preservative of Dissecting Material.—About the first of December, 1853, a fine muscular subject was injected through the femoral artery with a solution containing 3lbs. of nitrate of potash. It was then packed in a solution of common salt. It was dissected during April, and found to be in excellent preservation; the muscles being unusually red, a quality, to obtain which, the injection was used. It kept better on the table than any other subject we ever saw, lying for a month of warm weather without much decay, the muscles drying down instead of softening by putrefaction.

Another subject was packed in the brine about the 1st of January, the injection being omitted. This subject has stood during the entire summer in a room lighted by a large window, with a southern exposure, the barrel in which it was placed being open to the air at the top. After nearly nine months of this hard usage it is now upon the table in capital preservation. The advantages of this mode of preservation are these:

1st. It is cheap and certain.

2d. The tissues are dryer than when preserved in the usual manner, and the dissection consequently cleaner and less obscure.

3d. The nitrate of potash gives a lively red to the muscles.

4th. The subject bears exposure upon the table better, and does not communicate that extremely offensive smell to the hands, which accompanies ordinary dissections. A cereful washing removes all smell.

All good things have their drawbacks. The fault in these subjects is a hardening of the fingers and toes, which renders dissection of those parts well nigh impossible, as they cannot be softened by water to any extent. This hardening is attributed to the presence of an excess of salt in the solution. If this supposition should prove to be correct, we can conceive of no better means of preserving *material* for months, or years, than by common brine, as subjects thus preserved are (with the exception we have mentioned) really more pleasant to dissect than a fresh subject.—[*Buffalo Medical Journal.*

Quinic Ether.—A discovery which has lately been made in Italy, and which has excited much attention, is illustrative of the results of perseverance and industry.

In the month of June, 1852, a young man, M. Louis Manetti, a student of the University of Pavia, happened to witness the death of a patient with congestive fever, who died apparently from the impossibility of introducing into the system, in a short time, a sufficient quantity of quinine. Manetti was struck with the idea that the principle of the bark might be effectually administered through the medium of pulmonary absorption. Encouraged by Professor Pignacca, Manetti began a series of investigations, the results of which are detailed in a letter from Prof. Pignacca to Dr. Stambio of Milan, a translation of which is found in the "Annales de la Société Medicale de Grand."

Professor Pignacca has called the new agent for inhalation, *Quinic Ether*, probably for want of a better name, for it is not, properly speaking, an ether, and its positive chemical composition is not known. It is a liquid of a special inconstant odor, and is obtained by the distillation of quinate of lime (*quinate de chaux*) combined with alcohol; and is analogous to the etherial bodies in general, volatilizing like them.

Professor Pignacca states in his letter that he has administered this fluid by inhalation to eight patients; seven of them had tertian intermittent fever, the last neuralgia of the fifth pair. The neuralgia was of an intermittent type. The remedy acted admirably both in the cases of fever and in the case of neuralgia.

The quantity of the agent given is about a scruple at a time, repeated three or four times a day. It is administered in the same manner as chloroform, and it produces sensations somewhat similar.—[*N. O. Medical News, and Hospital Gazette.*

Effects of Fright on the Unborn Fœtus.—"I happened, the other day, to meet a most extraordinary account given by Baron Percy, an eminent French military surgeon and professor, said to have occurred after the seige of Landau, in 1793. If true, it is a most interesting fact, and one well worthy of deep investigation. He says, that 'in addition to a violent cannonading, which kept the women for some time in a constant state of alarm, the arsenal blew up with a terrific explosion, which few could listen to with unshaken nerves.' Out of ninety-two children born in the district within

a few moths afterwards, he states, that 'sixteen died at the instant of birth; thirty-three languished for from eight to ten months, and then died; eight became idiotic, and died before the age of five years; and two came into the world with numerous fractures of the bones of the limbs, caused by the convulsive starts in the mother, excited by the cannonading and explosion!'

"Here, then, is a total of nearly two out of three actually killed through the medium of the mother's alarm, and its natural consequence upon her own organization."

These facts, if such, are indeed interesting; and it is hoped the profession will improve every opportunity of testing the truth of them.—[*Lancet.*

Delirium Tremens. Tartar Emetic.—Dr. Peddie, (Monthly Journal,) discountenances the treatment by opium, and recommends, from an experience of 80 cases, the use of tartar emetic, in doses of from one-quarter to one-half of a grain every two hours. If the bowels are not opened by this remedy, compound jalap powder is given. The patient is not to be restrained by mechanical means, and light is freely admitted into the room, as by its means optical delusions are prevented.—[*Medico-Chir. Rev.*

Dropsy (*Ovarian*). *Iodine.*—Dr. Simpson (Monthly Journal) refers to seven or eight cases of ovarian dropsy in which, after tapping, tincture of iodine (two or three ounces) has been injected into the sac. In two or three cases the disease seemed arrested, but in the others this was not the case. No great pain followed the injection, and no febrile symptoms, except in one case.—[*Ibid.*

Epilepsy. Atropine.—Dr. Lange (Schmidt's Jahrb., No. 9, p. 299) has used atropine in 10 cases of eplilepsy (three men and seven women). The three men, who had suffered from the disease for many years, were cured in three, five, and six weeks. Two of the women were not improved, one died, and three appeared to be cured, as, after from five to eleven months, they had had no fresh attacks. In the last case, one of epilepsy and commencing idiotcy, the atropine failed. The dose appears to have been about the 1-100th of a grain. M. Delasiauve, in his late treatise on 'Epilepsy' (p. 369), states that he has experimented with belladonna for many years at the Bicêtre, and that, while he has seen some cases in which the fits were for the time suspended, he has only seen one instance of cure.—[*Ibid.*

Hydrocele. Collodion.—Velpeau (L'Union, Juillet) applies collodion over the scrotum on the third or fourth day, after the usual operation and iodine injection. The secondary inflammation and engorgement are much lessened in severity and duration. Velpeau intends to apply the collodion immediately after the operation in the next case he has to treat.—[*Ibid.*

Gonorrhœa. Subnitrate of Bismuth.—Both in acute and chronic gonorrhœa Dr. Caby employs, three times daily, an injection, composed of water mixed with as much trisnitrate of bismuth as can be suspended. It is to be retained five minutes; it causes no pain.—[*Ibid.*

Laryngitis. Nitrate of Silver.—Dr. Ebert (Annalen des Berlin Char. Krankheiten,) employs inhalations of nitrate of silver in substance with great benefit, in all inflammations of the lyryngeal mucous membrane. He has employed the nitrate of silver also in solution, after the manner of

Green, but has never been able to satisfy himself that the larynx was really entered. The mode in which the solid caustic is introduced is as follows: Three grains of the nitrate are mixed with one drachm of sugar; the powder is placed in a steel pen, which is itself firmly inserted in a quill open at both ends. The little apparatus is then put into the mouth, so that the end of the steel pen shall be on the root of the tongue; then the lips are closed round the quill, and the patient inspires forcibly. The first attempt is almost always a failure, and the nitrate is only tasted on the root of the tongue, but the patient soon learns to manage it very well; a little cough and irritation follow, but no great uneasiness. For young children this method does not answer, and a special apparatus must be used.—[*Ibid.*

German Poison Eaters.—Dr. Tschudi has published, in the *Wiener Medizinische Wochenschrift* two letters, the translation of which is to be found in the *Journal de Médicine de Bruxelles*, containing some curious details relative to a class of people who are habitual arsenic-eaters.

In some countries of lower Austria and of Styria, especially in the mountains which separate these parts from Hungary, there exists among the peasantry the singular habit of eating arsenic. They purchase it under the name of hedri, (*hedri*, *hedrich*, *hatterrauch*) from wandering herbalists, or pedlars, who, on their part, obtain it from workers in Hungarian glass, from veterinary surgeons, from charlatans.

These poison-eaters (*toxicophagi*) have a double aim; first, they wish to give themselves, by this dangerous habit, a fresh and healthy appearance, and a certain degree of embonpoint. Many of the peasant girls, and even the men, have recourse to this expedient from coquetry and a desire to please; and it is remarkable what success they attain, for the young toxicophagi are distinguished by the freshness of their complexion and by the aspect of flourishing health. The following is one of many instances. A girl who attended cows, in good health, but pale and thin, was employed at a farm in the parish of H——. Having a lover, whom she wished to attract yet more by her personal charms, she had recourse to the usual method, and took arsenic several times a week. The desired result was soon obtained; and after some months, she became fat, chubby-cheeked, and, in short, quite to Celadon's taste. To carry the effect further, she increased the dose, and fell a victim to her "coquetterie;" she died poisoned. The number of deaths from the abuse of arsenic is by no means inconsiderable, especially among the young people. Every ecclesiastic in those parts can speak of several victims, and Dr. Tschudi states that his researches among the clergy were very interesting. He learned that so careful were the victims of this practice to conceal what they had done, that the secret was often revealed only on the death-bed.

The second advantage gained by the toxicophagi is, that they become more "volatile," more free in respiration, and able to ascend high mountains with ease. Upon every long excursion into the mountains they take a little bit of arsenic, which they let dissolve in the mouth. The effect is surprising. They ascend without difficulty heights which would have been almost insurmountable without this practice. The author adds, that upon this experience, he has advantageously administered Fowler's solution in cases of asthma.

The toxicophagi commence with a bit of arsenic the size of a lentil-seed, or about half-a-grain. They keep to this dose, which they swallow several times a week, morning and evening, for a long period, to become accus-

tomed to it. Then they increase the quantity insensibly, but with precaution, until the desired effect is produced. A countryman, named R——, of the commune Ag——, a sexagenarian, and in excellent health, was in the habit of daily taking four grains. He had followed the habit forty years, and had transmitted it to his son. There was no trace of arsenical cachexia in this individual, no symptoms of chronic poisoning. It is to be remarked, however, that, when the practice is dropped, emaciation generally ensues from some cause, either from the withdrawal of the stimulus, or from accidental or acquired disease. The custom does not diminish the sexual passion, as is the case with the opiophagi of the East, or with those who use the betel in India and Polynesia. On the contrary, the feeling becomes more strong.

It may be as well to bring to mind a general use of arsenic in Vienna, among the stablemen and coachmen of the great houses. They mix a good pinch of the powder with corn, put a piece the size of a pea in a linen bag, and attach it to the bit of the horse. The saliva dissolves the poison. This produces a bright aspect of the skin, roundness and elegance of form, and foam at the mouth. The coachmen of the hills adopt the same practice before commencing a laborious journey; and horse-dealers carry with them small balls of arsenic, to be given to those animals which are being led to market. Should a horse thus treated pass into the hands of a master who does not employ arsenic, he gets thin, loses his freshness, becomes dull, and in spite of abundant food does not acquire his former sleekness.—[*London Chemist, from Gaz. des Hôpitaux.*

New Variety of the Human Species. Men with Tails. Authentic De-tails translated from the October No. of the Gazette Hebdomadaire, by John W. Green, M. D.—Dr. Hubsch, Hospital Physician at Constantinople, has addressed a letter on the subject of *Men with Tails*, which adds many interesting details to those already received from travellers. We will briefly lay before our readers the information, more or less positive, which we possess on the existence of this curious variety of the human species, and of which the earliest indication dates back as far as 1677.

Mr. Editor—At this time when attention seems to be concentrated on the subject of a tail-bearing race called *Niam-Niams*, it gives me much pleasure to be able to add some observations which I have had occasion to make at Constantinople.

In 1852, I saw for the first time one of this race, a negress; struck by this phenomenon, I interrogated her master, a slave merchant. I was informed by him that there existed, in Nigritia, Africa, a tribe called *Niam-Niams*; that all the members of this tribe bear the caudal appendix; and, as exaggeration is a necessity to the Oriental imagination, he assured me that he had seen tails, two feet in length. The one observed by me, was smooth, and without hair, was two inches in length and terminated in a point. The negress was black as ebony; her hair was crisped; the teeth were white, thick, and inserted upon the alveolar processes, strongly inclining outwards. The four canines were filed; her eyes were injected with blood. She ate raw meat with much relish, clothes were disagreeable to her; "son intelligence était au niveau de celle des gens de son espéce."

Her master had offered her for sale for six months, at an exceedingly low price, but was unable to sell her. The horror which she inspired not residing in her tail, but in her taste (which she took no pains to conceal) for human flesh.

Her tribe eat the flesh of prisoners taken in battles with the neighboring nations, with whom they are constantly at war.

When any of them die, the relatives, instead of interring the body, eat it; from this cause there are no cemeteries in the country.

They do not all lead a wandering life, many of them construct huts with the branches of trees; they manufacture the implements of war and of agriculture, cultivating maize, grain, &c. Cattle are also bred by them.

The *Niam-Niams* have a language which is altogether primitive, it contains many Arabic words. They go entirely naked, and wish for nothing but to satisfy their sensual appetites. Les fils couchent avec leures mères, les frêres avec leurs sœurs, etc.; there is a frightful pellmell. The strongest among them becomes their chief; he it is who leads them to battle, and it is he who divides the booty. It is not known whether they have a religion; but it is probable they have not, from the very great facility with which they embrace any that is taught them. It is very difficult to civilize them, their instinct leading them always to search for human flesh; there are examples of slaves who have killed and then devoured the children of their masters who had been confided to their care.

I saw last year, a man of this same race, having a *tail* one inch and a half long, covered with a few hairs. He seemed to be about thirty-five years of age; was robust, of good constitution, ebony black, and had the same particular conformation of the lower jaw, spoken of above, *i. e.*, the alveoles inclined outwards. Their canines are filed in order to diminish their masticatory force.

The *Niam-Niams* are endowed with Herculean strength. The merchants reject them, as they are so very difficult to subjugate, and the people fear to confide to them the guard of their houses.

I know, at Constantinople, the son of an apothecary, ten years of age, who was born with a tail, one inch in length; he belongs to the white Caucassian race. One of his ancestors presented the same anomaly. These phenomena are generally regarded, in the East, as a sign of brute force.

The Turks have known, for a long time this race of men, and are very much astonished that scientific Europe seems to ignore their existence at this late day. HURSCH.

To sum up by a scientific view of the case, the exisience of "men with tails" appears incontestable; and if travellers raise doubts on the subject, it is probably because they confound the *Niam-Niams* with a tail, with other Niams, neighbors of the first, anthropophagi like them, but deprived of the appendix.—[*N. Y. Med. Times.*

Something new.—At the New York Hospital, may be daily witnessed the extraordinary spectacle of *seven young and fair looking women*, who follow the physicians and surgeons on their daily rounds, and are at present at all the operations on males or females. The *individuals* aforesaid, have been allowed by the Governors, to take out Hospital Tickets, under the restriction, however, that they are not to visit the male wards reserved for a *certain speciality*. Their numbers has also been limited to *seven*, although applications have been received from a larger number; this is in order to test the yet untried experiment. We understand that these individuals are attending lectures at a certain *Water Cure College* (unchartered) in the upper part of the city. Before expressing our opinion on this innovation, we await further developments.—[*N. Y. Med. Times.*



a Objective end.
b Two gum elastic tubes.
c Two metallic tubes.
d Two ivory Knobs at aural extremities.
e Hinge joint.
f Spiral spring.
g Elastic moveable spring.

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ORIGINAL AND ECLECTIC.

ARTICLE V.

Cold Water in Acute Dysentery. By JOSIAH BROWN, M. D., of Gaylesville, Cheroke County, Ala.

CASE I. J. T. C., Esq., a farmer residing in Cherokee county, Alabama, aged about 40, was severely attacked with diarrhœa on the 22d of May last. I visited him on the 25th. His bowel affection had assumed a dysenteric character, as will appear from the following symptoms, viz: Dejection every half hour, attended with violent tenesmus and straining; passing a variable quantity (from one gill to half-pint) of thick, bloody mucus; thirst extreme; no appetite; tongue dry, with brown coat; pulse over 140 in frequency, quick and small; extremities varying in temperature, the cold spells being apparently attributable to the depressing influence of his intense suffering.

Administered: ℞. Castor oil, ℥ss.; turpentine, 40 gtts.

Prescribed, in three hours after, the following anodyne to be taken every 4 hours: ℞. Morphine, ¼ gr.; chloric æther, ℥ij.; camphor water, ℥ss.; bi. carb. of soda, x. gr. Also, morning and night: ℞. Blue mass, v. gr; diet, flour gruel.

26th. Found him somewhat improved in appearance; rested tolerably well during the night, having had one or two evacuations of the same character; pulse about 125, and rather fuller.

Prescription: Continue anodyne and blue mass.

27th. (morning.) Patient much weaker; represented to have had evacuations about every two hours during yesterday morning.

and much oftener in the evening and night, with considerable increase of fever. Extremities, now, quite cool; pulse feeble and about 120; evacuations about every hour, accompanied with cramp and tenesmus, without change in character. I remained with him to-day. Prescribed quinine, commencing at 7 o'clock, A. M., but failed to prevent the exacerbation of fever, which occurred at 10 o'clock, with great aggravation of the dysenteric symptoms.

1 o'clock, P. M. Prescribed the application of cold, wet towels, to the lower zone of the abdomen, frequently repeated, i. e., whenever the cloths assumed the temperature of the body—also, after each action, the injection into the rectum of one pint of the coldest water, which treatment was continued through the night.

28th. Here, I find the first change in the character of the stools—the muco-sanguinolent property being very much diminished, they consist chiefly of concrete fecal masses, suspended in the water which had been injected; and now, does he experience the first appreciable relief from his dysenteric distress.

Prescription: Continue the external and internal application of the cold water, though less frequently, viz., twice or thrice a day; also, continue quinine, blue mass and anodyne, as before prescribed.

29th. Find my patient very comfortable; pulse improved in force and diminished in frequency; skin of pleasant temperature and moist; tongue much cleaner; passages far less frequent, and fecal, though not entirely so, but attended with little pain.

Prescription: Continue the cold water.

30th. Patient much better in every respect: which improvement tended to a speedy recovery, the different phases of which, it is unnecessary here to detail.

CASE II. Mrs. H., of Cherokee county, Ala., aged 35, of delicate constitution and spare habit, was taken with frequent, painful and bloody evacuations, on the 10th of July last.

12th. Called to see her, and find her with high fever, complaining of a continuous dull pain, deep seated, in the lower region of the abdomen, and increasing to sharp griping at each approach of her calls to stool, which occur about hourly.

Prescription: ℞. Castor oil, ℥i.; turpentine, ʒi. Also, in four hours after, the anodyne dose prescribed in case 1st, every four hours.

13th. Patient had had several fecal evacuations from the oil and turpentine during the night, after which, the bloody mucus passages returned with severe pain and tenesmus; fever continues unabated, and no improvement in any respect.

Prescription: Continue anodyne, and in addition, the repeated application of cold, wet towels to the hypogastrium, as in No. 1. Also, blue mass, grs. v., night and morning.

14th. Patient no better. Pulse 145, and rather feeble; headache; tongue dry with dark brown fur; intense thirst with nausea and vomiting; evacuations rather more frequent, attended with painful straining; extremities cool; great nervous irritability and extreme dejection of spirits.

Prescription: Continue anodyne, blue mass and external cold applications. Also, inject 1 pint of the coldest water into the rectum after each passage.

15th. Find my patient quite comfortable, having slept pretty well during last night, in far better spirits—free from headache, nausea, thirst, &c.; pulse not much over 100; dejections much less frequent—about 3 hours apart. She had passed during the night, at different times, a considerable quantity of hardened fecal lumps, with but little of the bloody matter.

Prescription: Continue treatment; also, quinine.

16th. She is still improving: no fever; calls to stool greatly diminished in frequency, &c.

Prescription: The cold injections to be governed by the frequency of the stools. Diet, throughout, flour and milk gruel and some chicken soup.

Mrs. H. continued to improve and soon resumed her accustomed health.

Case III. Mrs. W., of the same neighborhood, aged 40, ordinarily of plethoric habit, fell sick on the 28th of July last, with that concomitance of symptoms which would be denominated dysentery. Never having had a physician in her family before, she exhausted the whole paraphernalia of domestic medicine upon her case, without any abatement of its severity, but which, on the contrary, was steadily enhanced with a corresponding diminution of her physical strength, to an alarming extremity.

August 7th. Called to see Mrs. W., and find her exceedingly low—very much emaciated, with extreme debility, not being able to arise to stool; entire loss of appetite; tongue very dry; nausea

and vomiting; skin hot and dry; pulse quick, small and 130 in frequency; abdomen tumid; alvine discharges small, muco-sanguinolent, and every half hour with excessive tormina and tenesmus.

Prescription: The application of cold, wet towels to the abdomen, and the injection of 3 pints of the coldest water per anum, immediately; and 1 pint injections to be continued after each passage.

This administration was attended with the most marked and prompt relief, as expressed by the patient. With the water was expelled a considerable quantity of the muco-sanguinolent, with some feculent matter.

Prescription: The anodyne mixture above-mentioned every four hours, and blue mass, grs. v., night and morning.

8th. Find Mrs. W. very weak, but without fever and feeling much better, having had only three or four evacuations during the night, and resting well. The distention of the abdomen has subsided; her passages recur only about every four hours with much less suffering.

Prescription: Continue cold enemata, anodyne and blue mass. Diet, chicken soup, &c.

9th. Patient still better in every respect. Continue treatment pro re nata.

The improvement of this patient was steady and rapid, and with the assistance of chalybeate tonics and a generous diet, she soon arrived at her usual robust condition of health.

Thus, might be multiplied, cases almost *ad infinitum*, from my practice of last summer and autumn, if it were necessary; but the foregoing will suffice to accomplish the object for which they were registered, viz: of calling attention to so simple and convenient, yet so powerful, safe and reliable a remedy as cold water, in the treatment of so distressing and dangerous a malady as acute dysentery. In the locality in which these cases were noted, this disease appeared with an almost epidemic invasion—furnishing satisfactory opportunity for displaying the respective merits of the varied, and I may say, antipodal modes of treatment of the present day.

I cannot say, that the now, justly, almost exploded practice of *narcotising* the diseased organ, presented no enticements, or had not its trial; nor that the recent and rather more rational, *purga-*

tive method, was not called into requisition, during my intercourse with this epidemic, both having to yield to the overwhelming superiority of a more simple and more rational procedure. Each of the former modes has its commendatory qualities, as well as its objections, which furnish each a sufficient plausibleness to cause them to be selected by some, for the only plan of treatment in this disease, just as these qualities agree with their conception of the indications presented therein. The opiate treatment relieves temporary suffering, but its plausibility consists in a suppression of complaint, without remedying the cause of that complaint. The purgative method, whether by continued drastic cathartics or emollient laxatives, may be considered equally objectionable, for by the former it is attempted (I imagine) to set up an excitement in one portion of the canal, which will counter-irritate that already existing in another, or to relieve the turgid condition of the vessels at the site of the disease by free depletion. And by the latter, the endeavor probably is, to cleanse the canal, remove all irritating substances and prevent their accumulation without furnishing any additional source of irritation. To answer these indications on this expensive plan, would occasion difficulty in another quarter, which I deem of considerable importance, although it may not be generally so esteemed. In an attack of dysentery, which is usually protracted, the fatiguing and agonizing concomitants which characterize the disease, being so detrimental to the physical strength of the patient, it appears unphilosophic to offend the stomach by nauseating purgatives, besides washing away, or rendering the absorbent surface incapable of receiving the little nourishment able to be borne by him, and diminishing his strength, which is of paramount importance here, by intercepting his nutriment, or laying it waste by drastic purgation.

I would assign to these two forms of treatment, the place of mere adjuvants, to be used conditionally, in connexion with what I consider a more rational plan. Hence, opiates may be given in accordance with the severity of the suffering, for their anodyne effect, and not with a view of suppressing the evacuations, which should be carefully avoided.

It is often best to premise the treatment with the exhibition of one dose of some laxative, as castor oil, to prepare for the dislodgment of the scybalous accumulation in the large intestines, and if a more stimulating agent is required to overcome the torpidity of the bowel, there is none more admirably appropriate than the

turpentine, whose stimulation is independent of any drastic modus operandi.

I will now briefly consider the superior advantages of the Cold Water Treatment, as pursued in the foregoing cases, and particularly its topical application by enemata. The immediate effect of its introduction is remarkable—the patient generally expressing entire relief from the pain and burning sensation, which suspension of suffering lasts for a considerable time. Thus, in its *anodyne* effect, surpassing, by promptness and completeness, all the ordinary means. The nervous irritability which is excited in these cases, with nausea and intense thirst, especially in females, and the high febrile excitement, yield equally to its *sedative* and cooling effects. The *evacuant* and cleansing properties of the measure, are unsurpassed by purgatives, and without the danger of reducing the patient by hypercatharsis or interference with nutrition. While hydragogue cathartics may reduce the inflamed condition, by a draght upon the turgid vessels of the part—the cold application, by a more economical process, would suppress the inflammatory action, by contracting these distended vessels, driving out their superabundant blood and fortifying them against a continuance of the phlogosis.

In conclusion, I hope it is apparent, that more efficient, universal and happy qualities, are not to be derived from any other treatment.

ARTICLE VI.

A Case of Hydrocephalus—Spontaneous Tapping—Death. By GEO. F. COOPER, M. D., of Americus, Georgia.

The following case is not reported for any novelty in the treatment, or the presence of any extraordinary symptoms, but, alone, for the unusual manner in which it terminated; being so far as I know, the only case upon record, where nature sought to relieve herself by the identical operation, not unfrequently practiced by art.

On the 15th day of May, I was requested to visit the child of Col. J. J. J., æt. three months, which had been from its birth remarkably healthy, and exhibiting a precocity unusual to infants of its age. It smiled and observed, with as much intelligence at three and four weeks, as is common to children of as many months.

Its bowels had been habitually constipated, often passing over two, three, four and sometimes five days, without an evacuation, and without impairment of its health, at least up to the time of the attack referred to in this report. The mother's attention was first attracted by the occasional and sudden screams of the child, and when moved, it often cried out as if in pain, or some tender spot had been touched. It frequently awoke affrighted, and apparently upon the eve of convulsions.

The child was found in the condition above described, which had been persistent for two weeks prior to my first visit. The fever was in irregular exacerbations—the surface sometimes intensely hot, and again scarcely appreciable, the skin remaining all the while pallid, except the checks, and they rarely and very slightly flushed.

The pulse was accelerated, and continued so even when the heat of surface was normal. There was no delirium, the child, until very late in the disease, being rational, frequently, even cheerful. Its bowels were now disordered, with frequent thin greenish stools, answering perfectly to those often seen in the disease—spinach stools. The thumb was not observed to be flexed into the palm of the hand as is often mentioned. Its strength and flesh kept up amazingly; the failure of both, however, was slowly progressing. In fifteen or eighteen days after my first visit, the spleen was noticed to be enlarged: this progressed rapidly until it occupied the left iliac fossa.

In this enlargement of the spleen, we had a beautiful exhibition of the truth of the doctrine of Revulsion, the more satisfactory, because it was developed by nature herself.

Pari passu with enlargement of the spleen, there was a measured abatement of the cephalic symptoms and troubles, and a hope that this natural substitution would eventually supersede the original attack upon the brain. In this hope we were forlorn; in from eighteen to twenty days, the spleen slowly receeded, and commensurate with this diminution was there a rekindling of the original symptoms with increased violence, and it was evident that the case was hastening to a speedy termination. Indications of stupor supervened, its occasional moments of cheerfulness were no more to be seen; it refused the breast and soon coma was complete, and death ended the sufferings of the little patient.

Six or seven days before dissolution, a sero-sanguinolent matter was observed to be escaping from a small opening immediately

below the the posterior fontanelle—the opening situate in a small red spot—nævus materni—such as is frequently seen upon children. The suspicion at once excited was, that there must be some connection between this opening and the brain, though the idea was novel to me, that this *tapping* was nature's operation. There were no precursors of inflammation at this point, the first thing noticed being the escape of the fluid. The quantity of matter discharged daily increased until its death, and from the vertex down to between the scapulæ, and around the sides of the neck to almost the middle line in front, became œdematous, from, as I supposed, the smallness of the opening, and its being somewhat valvular.

REMARKS.—The cause of the attack in the above case is not very palpable, though I have always believed that the habit of constipation which obtained with the child, at least precipitated it. Nature rarely fails in making some effort to relieve herself; but, in this particular disease, I do not know that the attempt was ever made before in a similar way, and had she performed her operation earlier, and enlarged the opening somewhat, we have no reason to doubt but that it would have been entirely successful.

ARTICLE VII.

Extraordinary Case of Prolapsus of the Rectum. By L. A. DUGAS, M.D., &c.

Having been recently consulted in reference to an extraordinary case of Prolapsus of the Rectum, I deem it of sufficient interest to record the following notes:

Mr. G., a native of Kentucky, but now a resident of Mississippi, about 35 years of age, of athletic frame and fine constitution, is, and has always been in fine health, with the exception of the infirmity to be described. About twelve years ago, during an attack of bowel complaint, he experienced for the first time some prolapsus of the rectum. The bowel affection soon subsided; but he was left subject to occasional descent of the intestine, which gradually grew more frequent, and finally attended each alvine evacuation. With the increased frequency of the prolapsus, the extent of the protrusion also became greater, and in a few months reached the present dimensions.

Mr. G.'s state is, now, that of apparently robust health; his

bowels are moved regularly every morning; his fæces are moulded and otherwise of natural appearance; but each evacuation is preceded by expulsory efforts and the protrusion of 8 or 10 inches in length of the rectum, which is inverted, and so much dilated as to offer a diameter of from 6 to 7 inches. The protruded mass is of the shape of a pear, the smaller extremity being at the anus, which is dilated to from 3 to 4 inches in diameter. In the centre of the larger extremity may be seen the aperture of the upper portion of the intestine about an inch in diameter, and from which the fæces issue upon the continuance of expulsory efforts. The mucous surface of the inverted mass appears healthy and the protrusion is effected without pain.

For some time after the occurrence of this infirmity, the patient would reduce the prolapsus in the usual way, by pressure with the hand; but he has since acquired the faculty of doing so without any mechanical force and by the mere effect of position and volition. He now can, and has for years been able to do so, at any time *induce* this extraordinary prolapsus by expulsory efforts in a few moments, and *reduce* it as promptly. For the latter purpose he places himself upon his knees and face, so as to bring the pelvis at the summit of an inclined plane formed by the trunk, and, to use his own expression, draws in the bowel by holding his breath; when it promptly re-enters the abdomen with a flapping sound as though a column of air rushed in with it. The anus then closes, and presents a perfectly natural aspect. I have seen this feat performed repeatedly, and even at intervals of ten minutes, with surprising facility.

The force by which the protrusion is effected is easily understood; that by which the return is accomplished is probably a combination of gravitation, by elevating the pelvis, and of atmospheric pressure, by fixing the abdominal muscles at the same time that an effort is made to elevate the diaphragm, and consequently to produce a vacuum in the abdominal cavity.

The patient states that, unless he has taken some laxative, no fecal matters ever issue until the prolapsus be complete. We might infer from this that some stricture exists to a sufficient degree to prevent more consistent matters from reaching the lower intestine; but this is negatived by the fact that his discharges are moulded of the usual size. The orifice seen when the protrusion is complete, appears normal. Walking, long standing, or any muscular effort, will induce a partial prolapsus, so as to incapaci-

tate the patient for the active duties of life, unless when on horseback. I proposed to treat his case with the actual cautery, according to Dupuytren's favorite method; but he was unwilling to submit to it, and returned home.

TRANSLATIONS AND CONDENSATIONS FROM FRENCH JOURNALS.

A new Hæmostatic Preparation.

Pagliari's solution, which immediately and completely coagulates blood when contained in a vessel, does not act precisely in the same way when applied to a wound where the blood is continually flowing and washing away the coagulum. M. Hannon has been led, from experiments made upon the blood of animals, to the discovery of the following compound, which possesses greater coagulating properties than Pagliari's solution.

Benzoic acid, . . .	1 part.
Alum, ...	3 "
Ergotin, ...	3 "
Water, ...	25 "

This is to be boiled for thirty minutes in a porcelain vessel, agitating continually, and replacing with warm water that which has evaporated. This solution is of a deeper color than Pagliari's solution, of a slightly styptic taste and aromatic odor. If it be evaporated to the consistence of an extract, agitating the mass all the while, to prevent the benzoic acid from separating from the rest of the ingredients, it becomes of a chocolate color, has a strongly astringent taste, and the odor of ergotin. This extract is, according to the author, the most energetic hemostatic now known, either applied to the bleeding surface or administered internally.

The external application is made by applying a thick layer of the extract to the seat of hemorrhage. When required to be administered internally, as M. Hannon did, successfully, in hæmoptysis, it is not necessary to subject the ingredients to the above process. They may be prescribed in the form of pills, as follows:

℞. Benzoic acid, ... 1 gramme.
Pulv. alum, }
Ergotine, } . . *aa* 3 grammes.

Mix, and make sixteen pills—one to be taken every two hours.

[*Presse Méd. Belge.*

Actual Cautery.

Knowing from long experience the great utility of the actual cautery, we have endeavored, says M. Sédillot, to do away with the inconveniencies of the common method, and to substitute one equally advantageous and more convenient.

The improvement which he suggests, is to substitute for the moxa and the ordinary heated irons, a pocket-case probe of gold, silver or steel, heated over a spirit lamp. The diseased parts are touched very lightly, so as not to produce blisters or escars. The cuticle alone is affected, presenting a dry, yellowish spot, the size of a pin's head. The impression is instantaneous and scarcely felt by the patient, producing ordinarily only a slight pricking sensation. In by far the greater number of cases this feeling lasts but a short time. If the pain should persist, the number of cauterizations should be lessened and the surface covered with wet lint, which will soon give relief.

The number of contacts with the heated probe should vary according to the nature and extent of the disease, as well as the sensitiveness of the patient, from three or four to thirty, fifty, and even more, and repeated once or several times during the twenty-four hours, or only every two or three days, being guided by circumstances.

This plan has proved of decided advantage where the cautery was not used as an hemostatic or destructive agent. The effect of the actual cautery is to draw the arterial blood rapidly into the parts touched. In a healthy part the redness is uniform. If the inflammation is unequally disseminated, the redness will be greatest at those points where the phlogosis is most intense. In those infectious ulcerations, which sometimes occasion dangerous or fatal inflammations of the lymphatics or veins, this cautery immediately modifies the condition of the affected tissues.

In ulcerations of a phagedenic or otherwise bad character, these cauterizations yield excellent results; deep inflammations, complicated with affections of the bones, serous swellings and indurations, are equally modified with great rapidity by this cauterization. A patient affected with swelling of the tibia, and deprived of sleep, from excessive pain, for four months, resisting all other treatment, was immediately relieved, and began to improve from the second cauterization. This is the most effectual means of cauterizing in gangrenous affections.—[*Rev. de Thérap. Méd. Chir.*

Iron by Hydrogen.

The following are the results obtained by M. Quevenne, in the treatment of eight cases of Chlorosis with this preparation:

The doses generally administered were from 20 to 30 centigrammes. Below 20 centigrammes, improvement was slow. When elevated to 40 or 50 centigrammes it was no faster than when only 30 centigrammes were administered. The patients generally bore the medicine well, the greater number feeling no inconvenience from it. In one case there were, for several days, cramps of the stomach, gastralgia, and even vomiting. In another, there was, at some times, pain in the stomach; but as these patients were subject to these accidents, it can scarcely be supposed that they were caused by the iron. In no case was a tendency to constipation or purging observed during the administration of the preparation. The treatment varied in duration from sixteen to seventy-one days; but the cases in which it was necessary to continue the treatment so long, were complicated with organic affections of the circulating apparatus.

From these results, the following conclusions may be deduced:

1st. Iron by hydrogen is the preparation which furnishes the most iron to the system from a given weight.

2d. This preparation is particularly remarkable for its activity; for in average doses of 25 centigrammes the same results are obtained as with doses of 40 or 50 centigrammes of other preparations.

3d. These observations negative the general belief, that insoluble preparations of iron are less active than the salts of this metal.

4th. It is therefore not true that insoluble preparations of iron are objectionable, because of their action upon the stomach and gastric juice.

5th. When iodide of iron is administered, it is immediately decomposed; the iodine passes off rapidly by the kidneys, say in fifteen minutes—whereas the iron is retained in the system and can scarcely be detected in the urine.—[*Ibid.*

Blisters applied to the Head in Typhoid Fever.

M. Lebeau, speaks very highly of this plan of treatment in the coma of typhoid fever; the recoveries being in the proportion of 15 in 20. He attributes the success to the very strong revulsive action of the blisters, thereby relieving the brain of the mass of serum which is found in the head of those who die in this condition. He cites numerous cases in support of this plan of treatment.—[*Ibid.*

Prize Esssay, read before the State Medical Society, on Difficult Labors and their Treatment. By M. B. WRIGHT, M. D., of Cincinnati.

[Concluded from February No. p. 111.]

In the February No. of the Western Lancet, 1851, Dr. B. F. Richardson reports as follows:

"I was called to see Mrs. S— at 8 o'clock A. M., July 9, 1850, aged 25 years, medium height, robust and compactly built. Upon inquiry of the midwife, (who had been in attendance from an early hour in the night previous) I ascertained that she had been in hard labor during the night, and that the membranes had ruptured seven hours prior to my arrival. Her pains being very strong, with brief intervals, I at once resorted to an examination. I found the right arm in the vagina, with the palm of the hand presenting towards the inner side of the left thigh of the mother. In the upper portion of the vagina were several folds of the funis, in which I detected strong and distinct pulsations. After having remained with the patient about a half an hour, observing during each pain, whether the child advanced or changed position, (neither of which occurred,) I determined on an exploration, in order to determine the practicability of bringing down the feet. After placing the patient in a convenient position, I slowly passed my right hand into the uterus. As soon as my hand reached the axilla of the child, it encountered considerable constriction from the uterus. After exploring for the neck and head, I directed my hand in search of the feet—passing it up, with the palm applied to the right side of the child, until it reached the ilium; beyond this point my hand would not pass, with the degree of force employed, which was sufficiently great to be compatible with safety and advantage. The uterus had firmly and persistently contracted around the pelvis, and over the crest of the ilium. I retained my hand for some time in its position, hoping to be able to insinuate my fingers beyond this point of constriction, and gain the feet, but was compelled to desist and withdraw my hand, and give over the attempt. My exploration discovered the position of the child to be as follows: its right side presented toward the left iliac fossa—inclining somewhat towards the sacrum. The right side of its neck was projected against the pubic arch, near its junction with the right ilium, the head occupying the right iliac fossa anteriorly. In this position it seemed to be firmly and persistently maintained. The impossibility of the expulsion of the child (it being evidently above the medium size), without decided manual interference, the great risk to the mother from an attempt to turn, so long after the rupture of the membranes, with the firm and consistent constriction of the uterus about the child, induced me at once to propose the advice and co-operation of another physician. By agreement, Prof. M. B. Wright was sent for, it then being between 9 and 10 o'clock. Expecting some delay, (on account of the numerous engagements of physicians generally

at that time,) I left the patient for the purpose of visiting some cases of cholera: with the understanding that word should be left at my residence, when it would suit Dr. Wright's earliest convenience to meet me in the case. Unexpectedly to me, the attendance of Dr. Wright was secured immediately—a contingency provided for, however, by my request, that should he return with the messenger, and before my return, to accompany my partner, Dr. Morgan, and do in the case as they thought best for the safety of the parties concerned. Being absent about one hour and a half attending to prior professional engagements, I returned by the house of the patient, and was informed that Drs. Wright and Morgan had been there about half an hour before, and that Dr. Wright had interposed in the case, being in too great haste to await the uncertain period of my return. I at once made an examination, and found the arm returned and the vertex presenting. The funis was prolapsed, but without pulsation. Observing the progress of the head during three or four pains, I found it disposed to descend, and only delayed by the resistance of the perietal protuberances. I then ordered *secale cornutum* in twenty-five grain doses every twenty minutes (as she seemed very much exhausted, and the pains inefficient) of which she took two portions. The pains became more energetic, and in about one hour from the time of taking the first dose, the child was expelled—lifeless. I judged its weight to be about nine or nine and a half pounds. A careful external examination gave no clue to the probable cause of death. It had been dead but a short time prior to delivery. Mrs. S— had a rapid and uninterrupted convalescence.

Dr. Wright's mode of manipulation in the case, was as follows: The patient being on her back, across the bed (in the usual position for turning) he introduced his right hand, passed a couple of loops of the prolapsed funis around the child's arm, and then returned it—converting it into a shoulder presentation. He then grasped the shoulder and thorax, and pushed the body of the child upwards and to the left side, in consequence of which the head was brought near the axis of the pelvis. He then relinquished his hold of the body, and grasped the occiput—bringing it down so as to enable the head to engage.

The succeeding number of the same journal contains a case of shoulder presentation, reported by Dr. Terry. After giving an account of the first labor of his patient, and of the difficulties encountered in consequence of the small size of the pelvis, the doctor proceeds: "On the evening of October 25th, 1850, about 9 o'clock, I was requested to see the above patient, being one year, three months and eight days from the time of her previous delivery, to attend her in her second accouchment. I learned that she had been afflicted with erratic pains for the last twenty-four hours, which at times were quite intense. I found her in bed, lying on her back, the position she felt most disposed to retain, it affording her most rest, and enabling her to endure her pains the better. I

made an examination in the position I found her. The os tincæ was dilated about two inches in diameter, readily yielding to pressure. The amniotic fluid was escaping in moderate quantities, showing evidently the rupture of the membranes. I was convinced at once it was not a normal presentation. After waiting three or four hours, the pains became more intense, I made another investigation, and found a shoulder presentation. I now made up my mind that turning must be resorted to—the sooner the better. At this time she had full pulse, flushed face, and spasmodic contraction in the body of the uterus. I resorted to bleeding, when the intensity of the pains ceased. After waiting a short time, I proceeded to the process of turning. I gradually and easily passed my right hand into the uterus, and with little difficulty found the right foot, and brought it down so that the toes were near the vulva. At this point I found a resistance to any further progress in that way. I then made search for the other foot, but did not find it. During this effort, the right hand of the fœtus came down, and on withdrawing my hand, the funis prolapsed. I now attached a strong fillet to the ankle, after which I passed my left hand into the uterus. I attempted to raise the child up from its present position, but failed, the head lying in the right iliac fossa. At this time the pains had ceased, except when roused by external force. The patient, myself, and attendants were much exhausted, from the severe labor and time devoted to effect delivery. After an interval of a few hours, I obtained the able assistance of Professor M. B. Wright. On our arrival the pains had returned, but they were not severe. Upon an examination he found the fœtus presenting with the right hand, leg and funis in the cavity of the pelvis, as before described. He attempted to turn by elevating the shoulder and making traction upon the leg, which he found already down. Failing in this, he endeavored to introduce his hand into the uterus with a view to obtain control of both feet, but the uterus had contracted so thoroughly upon the child as to render it impracticable. The doctor then decided upon a resort to version by the head. The leg, arm, and funis, were successively returned into the cavity of the uterus, and the vertex was brought into the superior strait, with the posterior fontanelle behind the left acetabulum. The patient had been previously put under the influence of chloroform. Uterine contractions having ceased, it was deemed advisable to use the forceps, which were adjusted before the hand of the operator had been withdrawn from the pelvis. It was soon found, however, that the instrument could not overcome another prominent obstacle to delivery, viz., a disproportion between the head of the fœtus and the brim of the pelvis. The perforator was then used, the forceps still retaining their hold. As soon as the cranium was lessened in size sufficient to pass the superior strait, it was brought forward, and delivery was accomplished by means of the forceps."

In the May number of the Western Lancet, 1851, a case is thus given by Dr. J. P. Walker :

" I was called Saturday noon, April 12, 1850, to see Mrs. L—, aged 30, in labor with her third child. The membranes had been ruptured on Friday morning, nearly thirty-six hours previous to the time I was called.

" I found her with severe pains, but on examination could not reach the os uteri. At eight in the evening, I could with difficulty reach the presenting portion. The meconium had been passing freely, and I had been led to expect a breach presentation, but upon close examination I found that the shoulder presented. I sent at once for the assistance of Professor M. B. Wright, who arrived at eleven o'clock Saturday evening."

At this time the arm was suspended from near the centre of the superior strait, the fore-arm being partially flexed, and looking towards the left. Dr. Wright proposed *cephalic version*, as an easy and successful mode of treating the case, which was acceded to. The fore-arm, which could be moved easily by the finger, was extended, and the hand escaped through the os externum, with the back of it anteriorly, and the thumb directed to the right thigh. The arm was brought down with a view to a more satisfactory diagnosis, and to indicate the proper manipulations for delivery. The presentation, and the hand to be used in changing it, being determined, the Dr. proceeded to the accomplishment of his object. The patient was placed, as in the ordinary way of turning by the feet. The arm which was now in the vagina, was returned so as to ascertain the relative position of the head. It was on the right side of the pelvis, the occiput in front, the face resting on the posterior surface of the right iliac fossa, and the right cheek against the promontory of the sacrum. The position of the fœtus being thus accurately ascertained, *cephalic version* was commenced.

The body of the fœtus was moved laterally and upwards, by slight force applied to the presenting shoulder, until the breech had ascended to the fundus of the uterus. The face, by this movement, was made the presenting portion. It was readily changed for the vertex, but this change could not be secured without the constant application of the finger to the occiput. This was not deemed advisable, as the expulsive efforts had not yet commenced, and the os tincæ was not more than two-thirds dilated. At half-past ten o'clock A. M., eight hours subsequently, the second stage of labor commenced, and when the next examination by touch was made, the face had again presented, and had partially engaged in the superior strait—the chin being directed anteriorly, and to the left. It was deemed best not to effect any change, either in presentation or position. As the face, however, passed through the superior strait, the chin inclined more and more backwards, until it was placed before the left sacro-iliac symphisis. Before reaching the inferior strait, the chin had again rotated forwards, without extrinsic aid, and finally it emerged under the arch of the

pubis. Labor was then speedily terminated, the second or expulsive stage occupying about two hours and a half. The fœtus was dead, and offensive from partial decomposition. It weighed about nine pounds.

The patient has been doing well since. This case is not only instructive as to the proper treatment of such cases, but also for the remarkable efforts of nature to assist in delivery."

Now after all this, are we not justified in declaring,

1. That at an early period in labor, and especially if called before the uterus has been deprived of its liquid contents, a shoulder may be converted into a vertex presentation more easily than turning by the feet is ordinarily performed.

2. That although the membranes may have been long ruptured, turning by the head can be accomplished with great facility.

3. That delivery by *cephalic version* may be speedily effected, after repeated and ineffectual attempts have been made to turn by the feet.

4. That *cephalic version* should receive a prominent, nay, leading place, as a means of expediting delivery in shoulder presentations.

The second of the questions already proposed, is, what mode of proceeding will prove most favorable for the mother?

In his chapter on podalic version, Churchill observes: "On the other hand its *disadvantages* are not to be overlooked. From the distance the head has to traverse, and the difficulty of seizing the feet, and of turning the child in utero, there must ever be a fearful risk of injury to the mother."

Upon an examination of the tabular views given by Lee, we find that out of seventy-one cases of shoulder presentations, in which turning by the feet was resorted to, "seven women died from rupture, and three from inflammation of the uterus." "Laceration and inflammation of the uterus are, therefore, the consequences chiefly to be dreaded. Four of these cases of rupture occurred in the practice of other accoucheurs, and three in patients under my own care, and where no great difficulty was experienced or force employed in turning."

In *cephalic version* the hand does not enter the cavity of the uterus, and, consequently, neither its walls, nor any portion of them, are forcibly pushed out. The fœtus is moved comparatively little within the uterus, the head being already near the superior strait; while in *podalic* version, the part to be first delivered, is most remote from the canal through which it must pass. In the former, the injury to the mother cannot result without great awkwardness on the part of the obstetrician, while in the other we have reason to feel surprised at the escape of injury. In turning by the feet the hand must necessarily be moved considerably within the uterus, and often while it is contracting violently. In turning by the head there is but little, if any, direct contact of the hand within the uterus. In the one case, contusion of the uterus

by the hand is to be expected—in the other case there is no injury, because there is no contact. Turning by the feet may occasion a severe nervous shock. Not so in changing the shoulder for the head.

How may the life of the child be best preserved? is the third enquiry to be briefly answered.

In describing the disadvantages of turning by the feet in all cases, Churchill says: "The mortality amongst the infants thus brought into the world is very great. As far as our statistics extend, they yield 174, out of 518 delivered, or 1 in 3."

The mortality in shoulder presentations is, doubtless, greater than this. In the first place the position of the fœtus weakens its hold upon life. In the second place the hand is more difficult of introduction into the uterus in shoulder than in head presentations, and whatever force is required is sensibly felt by the fœtus, and upon that part of the body where pressure is made with least impunity.

A timely resort to *cephalic* version gives the fœtus almost as much certainty of life as if the presentation had been originally of the head. Why not? The manœuvre amounts to but little more than in rectification of deviated head positions.

We are informed by Churchill that, "Bush gave an account in 1826, of fifteen cases, in which *fourteen* were born living. In 1827, Ritgen collected forty-five successful cases. Riecke has had sixteen cases." In all the cases treated by myself from the beginning, the children were born alive. The liability to compression of the chord and consequent death of the fœtus, is in proportion to the length of the labor, or rather to the descent of the fœtus in the cavity of the pelvis. Hence to be wholly successful, cephalic version should be performed a short time before, soon after the commencement of the second stage of labor.

Can any mode of treating shoulder presentations be relied on exclusively? The answer must be in the negative. We are disposed to adopt the language of Cazeaux, "that at the present day it would be improper to embrace either opinion exclusively, for some cases are better suited to the cephalic version, while there are others, on the contrary, where the pelvic one is alone practicable; consequently both operations should be retained in practice, leaving the judgment of the accoucher to determine the cases, where the one or the other ought to be preferred." And we will conclude this part of the subject by stating a few of the circumstances under which the different modes of turning may be adopted.

Turning by the feet is to be preferred in cases of inefficient uterine action, or exhaustion from long continuance of labor; in hemorrhage, convulsions, or in any case where there may be a demand for a speedy delivery.

Turning by the head should be selected in all cases where difficulty arises from mal-position merely; or in convulsions, hemor-

rhage, or prolapsus of the funis, if the uterus should be engaged in vigorous expulsive efforts. In rupture of the uterus our great reliance is in artificial delivery; and the question naturally suggested would be, which will guaranty the greatest safety, podalic version, or cephalic version aided by the forceps? And we would be guided in our action by the answer we gave to the question.

Which shoulder presents? The diagnosis of shoulder presentations has been already given, but it is still important to ascertain which shoulder demands our attention, and the relations the fœtus sustains to the pelvis and uterus. Either shoulder may occupy the brim of the pelvis, with the back in one case looking in front of the mother, while in the other case it may be directed towards her spine. The head may be in the right, and again the left iliac fossa, the breech occupying the opposite fossa, and the feet being high in the uterine cavity. But how are we to ascertain the actual and relative situation of all these parts?

It has been stated that the first vertex presentation (the occiput being behind the left acetabulum) is more frequent than all the others. If we admit that shoulder presentations are deviations from those of the vertex, it would be fair to *infer* that we were about to adjust the right shoulder with the back in front, and the head on the left of the pelvis. The direction of the axilla would indicate the opposite direction of the head, so also of the elbows. Perhaps the top of the shoulder, the neck, and even the head may be felt.

The direction of the back may be known by the scapula and vertebræ, and by the fore-arm lying upon the breast. If the coccyx, anus and iliac crests can be touched, the location of the pelvis is rendered certain.

The hand of the fœtus being in the vagina, can be used with advantage to ascertain which shoulder presents. If the palmar surface be directed upwards towards the symphisis pubis, and the thumb turns to the right side of the pelvis, we at once pronounce the right hand, and, consequently, the right shoulder as presenting. The reverse obtains with the left shoulder. Again, when the back of the hand appears in front, and the thumb is nearest the left thigh, the arm not being twisted, we should prepare to act upon the right shoulder, the back in front and the head in the left iliac fossa.

The back of the hand in front, with the thumb near the right thigh, indicates the presence of the left shoulder, the spine being in front, and the head on the right side of the pelvis.

So little do we consider the presence of the arm in the vagina as an obstacle to turning, we do not hesitate to bring it down, to aid us in our diagnosis if at all doubtful.

In this country, turning is performed, the patient being on her back. In cephalic version, we have always selected this position. The hand can be more readily introduced into the uterus, and the

feet reached, however, with the patient on her elbows and knees, than when on the back or sides. There may be cases in which advantage would be gained, by placing the patient in this position, preparatory to cephalic version. This is suggested, however, on the experience of only one case, which may be briefly so stated.

We were called to a patient in labor, with shoulder presentation, when we learned from the medical attendants present that the arm had descended into the vagina, full sixty hours previously. From three to five respectable physicians had been lending their aid, each, in turn, making ineffectual efforts to bring down the feet. With the patient on her back, we endeavored to pass our hand above the brim of the pelvis, but failed in this. The arm was swollen to an immense size, and, as it was much in the way, it was amputated at the shoulder, the child of course being dead. Still, the hand could not be extended above the superior strait. The woman, greatly exhausted, was placed and supported on her elbows and knees by assistants. With some difficulty, the uterus was then explored, the feet grasped, and delivery accomplished. When our hand came in contact with the presenting portion of the fœtus, however, we acted upon it as if to perform the cephalic version, and were satisfied of our ability thus to change the presentation. But, as labor had continued such a long time—as uterine action had, in a great measure, ceased—and as every moment of delay threatened an increase of great danger to the woman, a preference was given to podalic version.

The hand to be used.—The relations of the fœtus to the pelvis having been ascertained, and the patient placed in a proper position for turning, the next question is, which hand shall be introduced into the vagina? We answer, the hand, the palm of which is directed naturally towards the breach of the fœtus. It will be seen at once, that if the fœtus is to be moved in the direction of the breech, and in correspondence with the right side of the mother, and the left side of the operator, the right hand could be used with most success. In cases in which the head occupies the right iliac fossa, a choice could be given to the left hand.

The prolapsed arm.—It is generally conceded that, in turning by the feet, it is not necessary, nor would it be advantageous, to return above the brim of the pelvis, the arm, which may have fallen, or been brought into the vagina. In turning by the head, on the contrary, its reposition admits of no doubt; it is imperatively demanded. It is not demanded in consequence of any difficulty in moving the shoulder by its presence, but in the adjustment of the head at the superior strait, and its subsequent descent through the pelvis. By bending the fore-arm of the fœtus until the hand is directed to the upper portion of the vagina, and then pushing up the arm, the entire member will soon ascend above the brim of the pelvis, and be no longer an obstacle to complete version.

The manner of performing cephalic version.—The attention of the profession is not now directed to *cephalic version* as a new subject. It was recommended by Hippocrates, and from his days to those of Pare, was attempted in all cases in which the head did not originally present. Presentation of the breech and feet, were not associated with natural labors until a comparatively recent period.

The practice and influence of Pare led to the adoption of *podalic* version, and it has continued the reigning fashion up to the present time. Instead of changing the feet for the head, in all cases where the former presented, as recommended by Hippocrates, it is now deemed proper, following the example of Pare, to substitute the feet for the head, in many cases of difficult labor.

The spirit of progress, however, has not been idle, although it has been slow in making proselytes. Opposing doctrines have been carefully scrutinized, to a certain extent harmonized, and adapted to individual cases. Flamand, professor at Strasburg, recalled the attention of the profession to the utility of cephalic version, and exerted his influence, by argument and illustration, to have it reinstated. Some of the German and French writers have been induced to assign cephalic version a place among obstetric operations; but they consider it applicable to such a small number of cases, that they have bestowed upon it little attention, and have attached to it but a small share of practical importance.

Although American minds are ever on the alert, and ready to test the value of suggestions from a practical source, they have not directed special attention to the subject before us. Indeed, the investigation of it has been prevented, by the expressed opposition of our writers and teachers on the one hand, and their silence on the other. And here I may be allowed to advance an opinion, which was openly entertained when a teacher myself, that the mass of the profession think and act too little for themselves. They too often embrace the doctrine of the teacher as true, to the rejection of their own experience. We would say to the lecturer, independence rather than place—be a martyr for truth, rather than be false to your profession to appease local jealousy. And we would urge, that while the practitioner awards honor where it is due, he should be true to himself, by thinking and acting for himself.

A few paragraphs from Cazeaux will express the opinions generally entertained upon cephalic version by European writers:

"Flamand was also in favor of the performance of cephalic version, even after the rupture of the membranes and the discharge of the amniotic liquid. He has even gone so far as to point out the particular manœuver for each one of the distinct presentations admitted by him, for the child's anterior, posterior, and lateral planes; but we deem it useless to enter into those long details, more especially since they may all be comprised in this: to grasp

the preseting part, push it up above the strait, and then carry it as far as possible towards the side opposite to where the head is found, and afterwards get hold of the latter and bring it down, if the efforts made by the other hand through the abdominal walls, have not proved sufficient to make it descend into the excavation."

"Flamand himself acknowledges that this operation seldom succeeds, excepting when some region of the neck or upper part of the thorax presents at the strait. As for ourselves, we believe it would be difficult, even under such circumstances; however, it is barely possible, especially if there is still some water in the uterus, and the contractions are not very energetic."

"When a trunk presentation is complicated by the descent of an arm, the cephalic version, recommended by Ruffius, Rhodion, and others, should, in my estimation, be wholly rejected."

If we were to be restricted in our manœuvers by the advice given in some late obstetrical works, we should certainly fail in our object, and sooner or later we should be convinced that lessons given in the absence of experience are liable to errors, even in the outlines. Churchill tells us that, "if our object be to change the presentation—for example, to substitute the head for a shoulder, we must gently push up the shoulder, and then seizing the head, bring it down to the brim, and place it in the most favorable relation to the pelvis."

A professor representing the difficulties, nay, impossibilities, of performing cephalic version in shoulder presentations, places the leather baby in the manikin, raises the shoulder in a line corresponding with the axis of the pelvis, and with an air of triumph asks, "now, if I withdraw my pressure, or if the uterus should contract, will not the shoulder return to its original position?"

In reply to the above, let us merely observe, that the expressions "*raising the shoulder*," and "*grasping the head*," convey a very imperfect idea of the manœuver constituting cephalic version. And, to shorten discussion, we will present our own mode of proceeding.

Suppose the patient to have been placed upon her back, across the bed, and with her hips near its edge—the presentation to be the right shoulder, with the head in the left iliac fossa—the right hand to have been introduced into the vagina, and the arm, if prolapsed, having been placed, as near as may be, in its original position across the breast. We now apply our fingers on the top of the shoulder, and our thumb in the opposite axilla, or on such part as will give us command of the chest, and enable us to apply a degree of lateral force. Our left hand is also applied to the abdomen of the patient, over the breach of the fœtus. Lateral pressure is made upon the shoulders, in such a way as to give the body of the fœtus a curvilinear movement. At the same time, the left hand, applied as above, makes pressure so as to dislodge the breech, as it were, and move it towards the centre of the uterine cavity. The body is thus made to assume its original bent posi-

tion, the points of contact with the uterus are loosened, and perhaps diminished, and the force of adhesion is in a good degree overcome. Without any direct action upon the head, it gradually approaches the superior strait, falls into the opening, and will, in all probability, adjust itself, as a favorable vertex presentation. If not, the head may be acted upon as in deviated positions of the vertex, or it may be grasped, brought into the strait, and placed in correspondence with one of the oblique diameters.

It will be observed, that we do not act upon the shoulders by raising them. Perhaps a slight elevation would facilitate the movement already described—or it might be better to depress them—and, again by lateral pressure, without either elevation or depression, our object might be accomplished. *Pushing up the shoulders*, therefore, does not constitute a prominent part of turning, if by pushing up is meant the mere raising of the shoulders above the brim of the pelvis.

As the body of the fœtus makes its curved movement under the hand of the operator, it advances upward, as well as laterally, by a combined, rather than a single action, which would give it only one direction.

The back of the hand, with which we have been acting upon the shoulder, is toward the head of the fœtus—consequently, its hold upon the head would be apparently slight—yet, after the shoulders have reached the iliac fossa, the vertex may fall upon the palm of the hand in occupying the strait, and its adjustment become easy. If, however, there should seem to be a necessity for grasping the occiput, there could be no reasonable objection to a speedy change of hands.

The entire process of cephalic version is to be adopted in the absence of uterine contraction; or rather, during intervals of expulsive force. And, as it is now a vertex presentation, we must be governed, as to time and manner of delivery, by those general rules applicable to such cases.

In all our cases, except the one which terminated as a face presentation, the occiput assumed a position corresponding with the first or second presentations of the vertex. In this case the occiput was before one of the sacro-iliac symphises, and to this fact we have attributed the tendency of the occiput to slide above the brim of the pelvis, and the difficulty in keeping it in place. If there had been the usual degree of uterine contraction, however, the head would, in all probability, have become fixed, and the presentation would have continued as one of the vertex, instead of changing for the face.

It will be seen that we lay no claim to the introduction of cephalic version as a mode of treating wrong presentations, and expediting delivery. A very brief examination of the subject, however, may induce some to award to us originality in respect to the means by which a successful change of presentation may be accomplished.

That cephalic version, by external manipulation—by acting upon the fœtus through the parietes of the abdomen and uterus—should have few advocates is not surprising. To be successful, it confessedly requires a combination of favorable circumstances not often presented. The tissues both of the abdomen and uterus, must be thin and yielding—the liquor amnii must have been retained, and in considerable quantity—and the fœtus must be proportionably small.

In all the obstetrical works we have examined, in which cephalic version is recommended by internal manœuvre, it is directed to *raise* the shoulder as the first necessary impression upon the fœtus. Viewed anatomically or mechanically, men have not been persuaded into the belief, that raising the shoulder can facilitate the permanent descent of the head into the superior strait. They claim, what is apparent to the eye in viewing a proper engraving, and as it can be demonstrated with the manikin, that the elevation of the shoulder at the brim of the pelvis, tends to increase the long diameter of the fœtus, and the transverse diameter of the uterus, and without any favorable adjustment of the head after pressure upon the shoulder has been withdrawn.

Suppose we follow out the directions given by some, and after the elevation of the shoulder, attempt to force the body of the fœtus in a lateral direction, will not the breach infringe against the walls of the uterus transversely? To enable the head to engage in the superior strait, the body must be entirely removed from it, and this can only be done by raising the breech towards the fundus of the uterus. Raising the shoulder, therefore, is very naturally considered a means to prevent cephalic version. And we are not surprised that podalic version is almost universally adopted in the treatment of shoulder presentations.

If our mode of performing cephalic version is sufficiently clear, in the description already given, it will readily be distinguished from others. We claim for it great importance, on the ground that it is easily executed—that the mother and fœtus receive no injury—that there is little or no danger of subsequent displacement after the vertex has been fully adjusted—that, although it is most successful in recent cases, delivery may be accomplished after the membranes have been long ruptured—that it may be executed, after ineffectual efforts to bring down the feet.

Possibly our time might have been more profitably employed than in writing these pages. If, however, we shall have directed the minds of our brethren into a new train of observations, and aided in giving a true value to cephalic version—and, especially, if life shall thereby be preserved—we shall consider that an ample reward has been bestowed on our labor.—[*Ohio Medical and Surgical Journal.*

Three Lectures on the Spinal System and its Diseases. Delivered at the Chatham-street School of Medicine, Manchester. By MARSHALL HALL, M.D., F.R.S. L. & E., Foreign Associate of the Imperial Academy of Medicine of Paris, etc.

LECTURE I.

THE ANATOMY, PRINCIPLE OF ACTION, AND PATHOLOGY OF THE SPINAL SYSTEM.

Gentlemen,—I have accepted, with much satisfaction, the invitation of your able teachers, to expound to you the Anatomy, Physiology, and Pathology of the Spinal System. In doing this, I shall avail myself of experiment and reference to clinical observation. I wish to demonstrate to you the immediate and intimate connexion between physiology and practice. You may indeed regard these lectures as a specimen of a work which I am preparing for the press, designed specially for the medical student, to be entitled "PHYSIOLOGY *in the Laboratory and the Clinical Ward.*"

I propose, in that work, to effect the separation of mere empiricism from medicine for ever.

Physiology was divided, by the illustrious Bichat, into two systems, or sub-systems,—*the animal, and the vegetative.*

The nervous system has, in a correlative manner, been divided into the *cerebro-spinal and the ganglionic.*

Both these divisions are defective. There is a *third* sub-division of the nervous system, hitherto undetected, which forms an essential link with the other two, and which I have designated *the Spinal.*

Observe this frog. You are all familiar with its natural movements. I divide what was termed the cerebro-spinal system just below the occiput.

I stop for a moment to call your attention to a most interesting phenomenon. I seize one of the toes of a posterior extremity between my thumb and finger, making a little gentle pressure and movement. No effect is produced. In a minute, or less, you will see how different the result will be. The animal is in the state of *shock;* just such a shock as we observed in practice, as the effect of a violent fall from scaffolding, or a crushing accident from machinery. I repeated the experiment. You see the manifestation of returning power in energetic movements.

This experiment, repeated with care, would afford the means of investigating the phenomena of shock, and of a principle of practice. For example; after a violent comminuted fracture, is it better to amputate immediately or after the lapse of a certain interval of time?

I again call your attention to my experiment. Observe how energetic the movements of the frog now are on exciting the skin of the foot; how similar, too, to ordinary voluntary motions! Who would not be beguiled into the conclusion that in this animal sensation and volition still exist?

Nevertheless, if my experiment has accurately divided the cerebrum and cerrebellum from the medulla oblongata, and if I induce quiet in the animal by gently controlling its movements, as you see, it will never move spontaneously more! Nay, though I place it in a position which, if sensibility remained, *would be* the most painful, yet, quiet once induced, and *all* external excitation avoided, it will never move again. It might be left in such a position, and if so protected from excitement, it would be found the next day in the same position still.

But again I rub the toe between my thumb and finger, and again it moves; it jumps, and it crawls; the latter movement consisting, in fact, in a series of movements induced by the renewed contact of points of the cutaneous surface with the surface of the table.

What is the *rationale*, what the relations, of these singular phenomena?

Gentlemen, nearly a quarter of a century ago, I was engaged in the investigation of the circulation of the blood in the batrachian reptiles; I had been examining the pneumonic circulation in the *triton;* the animal lay on the table; I removed the head and the tail. On touching the latter by the point of a probe, it coiled up! I asked myself the questions which I have just proposed to you. From this simple fact and observation have resulted the discovery, the elaboration, and the application of the SPINAL SYSTEM—that system which, as I have said, I am about to expound to you in these lectures.

I again recur to my question—What is the *rationale*, what the relation to *life*, to anatomy, and to physiology, of this phenomenon? I have removed the cerebrum and cerebellum; it does not therefore depend upon these. But I proceed further; I now remove the whole of the internal viscera, and, with them the whole of the ganglionic system. Still the movements continue as lively as ever!

Observe this physiological preparation well. There is not in the Hunterian Museum a preparation more replete with the deepest interest. It is the demonstration that when the centre of the cerebral system and when the entire ganglionic system are removed, there still remains a *third* system, independent of each and of both, *sui generis*, autocratic!

Place this specimen of the decapitated, eviscerated frog in your museum—the demonstration of the distinct and independent spinal system—in memory of this day!

Do not be disconcerted that I show you these things in so humble a creature. *All* physiology exists in the caterpillar or the butterfly, if we could only detect it. The least of God's works is infinite.

I began by stating to you that hitherto anatomists and physiologists had divided the nervous system into the cerebro-spinal and the ganglionic. I have analysed these, and I have demonstrated to you, that in the midst of these two there is a *third* system. As the chemist detects, in a mineral hitherto regarded as consisting of

certain elements—say silver and gold—a new element, platinum, so I, in the midst of the cerebro-spinal and ganglionic nervous systems, have detected a new element—the *spinal;* and of how great moment this is I must proceed, without further delay, to unfold to you.

I revert once more to this interesting preparation: the cerebral centres and the ganglionic system are removed; what remains? what is its anatomy, its principle of action, its physiology, its pathology, its therapeutics? what its relation to *life* and *death?*—questions of the deepest interest.

In the first place, observe me now destroy, in this decapitated, eviscerated frog, by means of this needle, the spinal marrow. Now all is still! I irritate the toe in vain. I wait in vain for recovery from shock. All the interesting phenomena formerly manifested are extinct! They depend, then, on the spinal marrow, *their* spinal centre!

In the next place, I take this preparation, which is similar to the former one—viz., without cerebral, without ganglionic systems, and I denude the lumbar nerves. The excited movements in both lower extremities are, as you see, perfect. I divide this *right* lumbar nerve; the excited movements in the *right* leg, and in that leg only, are extinct!

The excited reflex movements depend, then, not only on the spinal *centre*, but on the nerves connected with that centre.

You observe the phenomena still perfect in the *left* leg; I remove the skin from the foot; the excited movements are again extinct. They depend, then, in this instance, on the integrity of the integuments of the part to which the excitation is applied. In these integuments, in fact, resides the *origin* of those nerves on which these excited reflex actions depend.

But now, gentlemen, I must beg your best attention whilst I explain more particularly the nature and forms of that nervous structure which constitutes the spinal system.

If I either strip off the skin, or destroy the spinal marrow, or divide the lumbar nerve, the phenomena cease. They depend, then, on the *origin* and on the *course* of certain nerves, and on their spinal *centre.*

But a little more minutely: If I remove the origin of this structure, by removing the integument; or if, within the spinal canal, I divide the *posterior* root of the spinal nerves; or if I destroy the spinal marrow itself; or, if I divide the *anterior* roots of the spinal nerves; or, if I divide the nerves in any part of their course *to* or *from* the spinal marrow, I annihilate all reflex phenomena.

Here then is a new *Demonstration:* all reflex actions depend on an *in-going* nerve, with its *origin* in the tissue excited; on the spinal centre; and on an *out-going* nerve, with its *termination* in the muscles. These constitute a *nervous Arc,* consisting of parts *essentially* linked together; *a new kind of Anatomy,* established and demonstrated for the first time.

Each *special* excited, reflex, or diastaltic action (so I have designated it, because it is excited *through* the spinal centre), has its *special* diastaltic nervous Arc. Of these *Arcs* there is an extensive *series* in the animal economy. Together with their continuous *centres*, they constitute the spinal system of connected eisodic (or in-going) and exodic (or out-going) nerves.

Gentlemen, no facts in chemistry or physics are more demonstrable than these; none more valuable in their relations respectively; whether we contemplate life, disease, or death, the spinal system becomes now our constant guide.

Let us now, gentlemen, consider what we have within the spinal theca. The sensations of the hands, feet, &c., imply an uninterrupted connexion between those parts and the cerebrum, upwards. The acts of volition of the hands, feet, &c., imply a similar uninterrupted connexion downwards. There are, then, *two* nervous conductors, whether distinct fibres, or whatever they may be, along the spinal marrow, which, in this sense only, may be viewed as a *spinal Chord of nerves*, of sensation, and of volition.

But when the cerebrum is removed, when all sensation and volition are extinct, if we excite the skin of the lower extremity in the frog, the anterior extremity is moved, and *vice versâ;* phenomena which cease either on removing the spinal marrow, or dividing the lumbar nerves. How then are we to view these structures?

The lumbar nerves convey sensation and the mandates of volition to and from the cerebral centre, when that remains; they convey the eisodic excitor influence, and the exodic excitor influence, when that centre is removed. The spinal centre is the general key-stone to the diastaltic arcs.

As certainly as the lumbar nerves in the frog convey sensation and volition, so certainly do they convey these other two influences. If Sir Charles Bell has proved that such nerves are *double*, I have proved them to be *quadruple*.

The posterior roots of the intra-spinal nerves are not only sentient, but eisodic excito-motor; their anterior roots are not only conveyers of the influence of volition, but of exodic excito-motor. There is precisely the *same kind* of proof of one of these functions, as of the other. The spinal marrow; the lumbar nerve in the frog; the sciatic in the human subject; are each and all *quadruple* in their mode of action; I do not say in their structure.

There is an additional fact or series of facts: the spinal marrow is the conductor of the influence of emotion, and of that of undue acidity in the stomach, when these affect, the first directly, the second in a reflected manner, the action of the heart—a subject requiring new and careful investigation.

Enough has been said, then, gentlemen, to convince you that the spinal marrow is no mere chord of nerves. Enough has been said to show you that it is intimately connected with the ganglionic system. And especially, enough has been shown to prove to you

that it is the great centre of a series of actions in the animal economy.

You will be still more impressed with the importance of the spinal system, when I tell you that, besides the phenomena which I have brought before you, it is the nervous centre and agent in *All the Functions of Ingestion and of Egestion* in the animal economy, in *the entire Class of Convulsive Diseases* in pathology, in the action of a certain *Class of Remedies*, and in the whole of that department of medicine denominated *Obstetrics!*

Having made these observations, which relate principally to the *Anatomy* of the spinal system, I must now call your attention to its *Principle of Action.* This I have proved, by a series of the clearest experiments, to be the *vis nervosa* of Haller. But this celebrated physiologist, Bichat, and Professor J. Müller, all laid it down as a *Law*, that this power acts in the direction *downwards* only. As long as this idea prevailed, it is obvious that it *could* have no application to *physiology*. For how could the spinal marrow or an exodic nerve be irritated physiologically? Its application was accordingly limited to pathology.

But by a series of experiments on the turtle, I proved that the *vis nervosa* may act *upwards* and *inwards* as well as *outwards* and *downwards*, and then its application to physiology became evident.

If you remove the head and viscera in the turtle, and excite an eisodic nerve between the upper and lower part of the animal, *all* the extremities are moved. The influence of the *vis nervosa* has been *inwards*, and *upwards*, and in all other directions, and not *downwards* only.

It now became easy to explain the various acts of ingestion, retention, egestion, and exclusion, depending, as they all do, on an eisodic excitement.

I may now, before entering on this topic, give you a general idea of the Nervous System as we now view it.

The cerebrum, the cerebellum, and, in a certain sense, the medulla oblongata, may be regarded as the Centre of the Cerebral System, of the nerves of special sense, and of volition, of intellect and of the passions, of pleasure and of pain. By its means we are placed in relation to all that is *external*, *psychically*. By its means we perceive, by its means we seize and use, external objects.

There is good reason to believe that intellect is seated high, the emotions lower, and the faculty of pleasure and of pain lower still, in their general cerebral centre.

Below the centre of the cerebral system is that of the spinal system, and its analogue in the articulata, &c. The spinal centre includes the medulla oblongata and medulla spinalis. It may be divided into—

1. The Medulla Oblongata, the spinal centre principally of the acts of ingestion and of egestion, by which the preservation of the individual is effected, and especially those of deglutition, respiration, &c. With this centre, the pneumogastric, the diaphragmatic,

&c., of such momentous importance in these acts, are essentially linked;

2. The Brachial Enlargement;

3. The Femoral Enlargement; and,

4. What, I think, may be designated the *Lower* Medulla Oblongata, the analogue with its nerves of the organs of generation, of the upper with its pneumogastric; and the spinal centre in the acts for the perpetuation of the species.

In each of the acts of ingestion and egestion to which I have alluded, there is the essential agency of a diastaltic spinal arc. The pharynx and larynx are excited by eisodic and exodic branches of the pneumogastric; the pneumogastric is the internal excitor of inspiration, acting through the spinal centre and the diaphragmatic and intercostals.

Similar diastaltic nervous arcs constitute the nervous media through which emission, conception, parturition, &c., are effected. In all these are nervous *origins* in exciting surfaces, an eisodic nerve, the spinal centre, an exodic nerve, and muscular terminations. The *law of action*, the mode of action, the channel of action, are in all identical or similar. All have the same object or objects—ingestion, retention, egestion, exclusion.

Can anything be more simple and scientifically beautiful?

All these acts are *physical*. As the cerebral acts depend on the immortal ψυχη, these depend on the *vis nervosa;* as those relate to external objects psychically—viz., to objects *without*, these relate to them physically, acting *from without to within, and from within to without.*

The spinal centre, with its nervous arcs, and the muscles in which these terminate, are the dynamic agents which accomplish that "*tourbillon*" so eloquently described by Cuvier.

The ganglionic system relates to all that is *within*, governing the *peristaltic* actions, assimilation, the secretions, the excretions, &c.

But of these functions, I must treat as cursorily as I have done of the cerebral system.

They are greatly under the influence of emotion, and of sympathetic or synergic action through the spinal centre. We have only to observe the effect of derangement of the stomach, or of eroded viscera, on the action of the heart, the skin, &c., in connexion with experiment, to arrive at this conclusion.

The experiments to which I allude are the following:—Let the head be removed in a frog, the spinal marrow remaining, and the circulation be ready to fail: if we now crush the stomach or a limb with a hammer, the action of the heart ceases. Let the conditions be the same in another frog, with the addition that the spinal marrow is also removed: in this case, no influence is perceived, on crushing a limb or the stomach, on the action of the heart. Now, the difference is the presence of absence of the spinal centre. This experiment, however, requires careful repetition.

Now, gentlemen, I think I may hope that you have a sound

knowledge of the spinal system, as far as it extends; for it is founded on experiments which your own eyes have seen, and which I think you will not forget.

As in the present lecture I have brought before you the Anatomy and Physiology of that system, I propose, to-morrow, to treat of its Pathology.

You will, if I am not mistaken, find your knowledge of the spinal system the key to the diagnosis of the diseases of the nervous system. It is to these, in some degree, what the *Stethoscope* is to diseases of the heart and lung, the administration of a new kind of knowledge being as that of a new mode of observation; and if to know the disease is *not* half the cure, it *is* the whole of the treatment.

To-morrow evening, then, I propose to discuss the subject of *the Diseases of the Spinal System.*

LECTURE II.

THE PATHOLOGY AND MODES OF DEATH IN DISEASES OF THE SPINAL SYSTEM.

Gentlemen,—As I stated at the close of my former lecture, I now proceed to bring before you the Pathology—the *living* Pathology, the Physiology,—of the Diseases of the Spinal System.

Already I have said that the spinal system is the source and seat of *the Class of Convulsive Diseases.* Amongst these, *Infantile Convulsion*, *Puerperal Convulsion*, but especially *Epilepsy*, take the chief rank.

Epilepsy has received a variety of designations, such as *morbus sacer*, *morbus Herculeus*, expressive of its formidable character. It has long been regarded as the *opprobrium medicorum.* Even Esquirol, in his excellent work, "Les Maladies Mentales," expresses himself in regard to it in the following terms:—

"Les symtômes de l'épilepsie sont tellement extraordinaires, tellement au-dessus de toute explication physiologique; les causes de cette maladie sont tellement inconnues, que," &c.

I am almost afraid, after making these statements, to say what are my own views of this formidable malady, the result of my own labours. And yet I may not withhold the truth. I will therefore frankly tell you that I regard this *opprobrium medicorum* as removed for ever. I think no disease is better understood, in its physiology or pathology, since the detection and application of the SPINAL SYSTEM—than EPILEPSY! It *consists*, in fact, of Direct, or Reflex Action, and dire Effects!

I am not blind to the many obscure points in the pathology of this and the other formidable diseases of this class. But in what department of medicine is there not much still left for the physician to discover? It is in their comparison with other diseases that I regard the inexplicable epilepsy as no longer inexplicable.

I must commence my explanation by drawing your attention to three most important physiological facts:—

If we puncture or lacerate, or otherwise injure the cerebrum or cerebellum, or the cerebral nerves of special sense, in every possible manner, we observe *no results*, *no phenomena*, no expression of pain, no excited movements.

The cerebral system in all its parts is, in this respect, *in*explicable.

But if we touch any part of the spinal system, and especially the spinal centre, with the point of a needle, ever so slightly, there are immediately excited muscular movements, spasm, convulsion.

The spinal system is, in all its parts—*excitor*, *excito-motor*.

These important facts constitute the foundation of all our knowledge of the diseases of the nervous system, and are the very source of all *diagnosis* in regard to them.

For the same facts, as is proved by clinical observation, hold in regard to the human subject.

By experiment and by observation, then, we are led to these conclusions:

No lesion of the cerebral system, limited to the cerebrum, *can* be attended by spasm or convulsion.

No structural lesion of the spinal system, short of destruction, *can* occur *without* exciting spasm or convulsion.

If, in affections of the cerebral system, we observe spasm or convulsion, it is because it is *not* limited, in itself or in its effects, to the cerebral system. Thus, congestion of the centre of the cerebral system may, as in hanging, become extended to that of the spinal system, and then spasm or convulsion supervenes.

Or affections of the spinal centre may consist in gently applied *pressure*, not in lesion of tissue, and then paralysis, and not spasm or convulsion, will be observed. Or it may consist in sudden or violent *shock*, or utter destruction, and then, I need scarcely say, that paralysis, and not spasm or convulsion, will occur. All this we have seen demonstrated by experiment; all this you will see hereafter in your observation in the clinical, and especially the surgical, ward.

What a means of *diagnosis*, then, have we obtained by these simple physiological facts! How has physiology become our guide in practice!

I have thus explained to you, gentlemen, how disease of the cerebral centre may, by pressure downwards, affect the spinal centre. But another question arises: How does a disease of the spinal system, as a pure convulsive malady, affect the cerebral?—for such is the frequent event, as we observe in epilepsy.

Observe what occurs in the most *marked* cases of this dire malady. The head becomes fixed, or there is torticollis, by the action of *the muscles of the Neck*,—trachelismus; the jugular and other veins of the neck are compressed; the capillary system of the neck, the face, the intra-cranial structures congested; the veins start, the arteries throb; the *cerebral* centre becomes implicated. *All is intelligible! All is explained!*

Affection of the centre of the cerebral system is extended to that of the spinal system—the medulla oblongata—by downward pressure: affections of the spinal system are extended to the cerebrum, by *trachelismus!*

That *all* this is so, is demonstrable. That it is *always* so, is, perhaps, what I ought not, however disposed to do so, to assert. And, gentlemen, does it not constitute a beautiful specimen of the *physiology of disease?* But such is the whole of our recent views of epilepsy and of the *Class* of convulsive diseases, as observed in the clinical ward, to which I must now recur.

And first, pray observe with me an experiment or two.

I have removed the cerebral centre in this frog. Its spinal system is still most lively and energetic. I take and rub the toe between my thumb and finger; you observe the almost convulsive movements produced: I now touch the upper part of the spinal centre with this needle: the animal is thrown into the most violent convulsions!

Gentlemen, these experiments are *types* of disease; they are the types of epilepsy and other convulsive diseases.

The *first* is the type of *ex-centric* epilepsy;

The *second* is the type of *centric* epilepsy.

For the first was induced by an excitant applied to a part of the spinal system at a distance from its centre; the second to that centre itself.

So it is in epilepsy; so it is in convulsive diseases generally, in the human subject! Do not these simple and illustrative facts interest you? They are of the deepest interest.

Do you not now perceive *how* dentition, and gastric and enteric and uterine irritation, may excite spasm or convulsion, even epilepsy? And do you not now perceive that ex-centric epilepsy is no more an *opprobrium medicorum* than infantile or puerperal convulsion; for that it is equally intelligible?

You see again the violent convulsion which I excite by again touching the spinal centre in this frog by this needle.

Such is the dire state of things in centric epilepsy, whether this be of organic origin, or have become organic in its course; whether it be congenital, on one hand, or inveterate on the other.

The cases of epilepsy which occur in private practice are, for the most part, of the former or ex-centric kind, and *curable;* however, for many reasons, difficult to cure. The cases which we see in the lunatic asylum, and especially in the work-house, are generally centric, and—must I not add?—too generally incurable.

Allow me to draw your attention to this *Table.* It has cost me much labour; but it contains in a page, a volume. You will find it in The Lancet for 1850. Procure it, or copy it, and study it well. For, allow me to say, I know of no such specimen of this most interesting pathology. The *chain* of events in epilepsy and other convulsive diseases, is pursued in it, *link by link.* The *causes* are arranged in this first column, the principles and modes of

treatment in this last; the *rationale*, the various stages, forms, and complications in the intermediate ones. It would occupy us too long were I to enter into its details. I have only time for a rapid sketch.

The ex-centric causes act on eisodic nerves, thence on the spinal centre, and thence along exodic nerves, on the various muscles. Of these, few, many, or all may be affected, and the malady may be the very slightest or the very direst. Amongst the rest—I was about to say, chief amongst the rest—are the muscles of *the Neck and of the Larynx.*

By the contraction of the muscles of the neck the veins of the neck are compressed, as I have already noticed; and the extra-cranial and intra-cranial tissues and organs become affected with venous congestion and all its consequences. Nay, I am disposed to say that, in every case in which there is such venous congestion of the neck, face, eyes, brain, it arises from this trachelismus, latent or evident. I do not wish you, however, to adopt this opinion without examination; but rather to subject it to a most careful investigation for yourselves.

By the contraction of the muscles of the larynx in laryngismus, this vital inlet to the respiration, combined, as it usually is, with *breath-struggles*, I believe the direst form of epilepsy, with its direst effects, as coma, mania, dementia, &c., to be produced.

I do not say that these effects may *not* arise in cases in which there is only trachelismus and no laryngismus; but I am convinced that they are *chiefly* the effects of laryngismus; and hence they have subsided in cases in which the laryngismus has been disarmed by tracheotomy, as I shall have to state at length in my next lecture.

And now, gentlemen, you perceive in what sense epilepsy may be regarded as a cerebral disease. Cerebral in its very *origin* it can never be. It may be intra-cranial in its origin, because within the cranium there are many tissues, as the membranes, from which eisodic nerves arise, many eisodic nerves, the fifth especially, pursuing there a part of their course; and the medulla oblongata,—all which may be excited by the presence of an exostosis, a tumour, a variety of diseases. But I repeat that no disease of the cerebral centre, limited to that centre in itself and its effects, does or can produce epilepsy. Yet every day we read in medical writings of affections of the cerebrum inducing epilepsy. Shall I give you an example of this? For once I will relinquish the gravity of my subject, and present you with a specimen of modern pathology, so called—"*I hold* (!) that the peculiar features of an epileptic seizure are owing to the gradual accumulation of morbid material in the blood until it reaches such an amount that it operates on the *brain* (!) in, as it were, an *explosive* (!) manner. In other words, the influence of this morbid matter, when in sufficient quantity, excites a highly-*polarized* (!) state of the brain," &c., &c.

If such feebleness existed alone, I would not add another word.

But I am constrained to add that this feebleness is associated in the author whom I have quoted with at least an equal degree of malignity, and in him assuredly the *odium medicum* is *not* extinct.

Exciting causes: the Spinal system; the Neck; the encephalon; such are the links of this chain of pathology. There remains another to which I must now draw your especial attention: it is—the medulla oblongata, with its *pneumogastric nerve.*

I have already adverted to laryngismus as giving to epilepsy, and convulsions generally, its most formidable character. This form of laryngismus is *spasmodic* or *convulsive*, excited through the spinal system.

But there is another form of laryngismus. After a severe epileptic convulsion, the patient is left in a state of *coma*, or, as it may be termed, of *simple apoplexy.* This condition may prove fatal. The respiration becomes stertorous—that is, there is laryngismus. But this laryngismus is very different from that formerly described: it is less complete, but more persistent; it is, indeed, permanent; some one said, in rather familiar phrase, "The patient snores his life away." This laryngismus is *not*, like the former, spasmodic, but paralytic. It is owing to compression or congestion—an apoplectic state—of the medulla oblongata, and *paralysis* of the pneumogastric nerve, in which every branch, as well as the recurrent laryngeal, is implicated.

Apoplexy of the medulla oblongata; paralysis of the pneumogastric nerve! Gentlemen, did you ever hear of these expressions before? If, then, I *demonstrate* these things to you, you will not have assembled here and listened to me in vain.

Legallois—the illustrious Legallois—divided the pneumogastric above the origin of the recurrent. The larynx became partially closed. The breathing was *stertorous.* In a word, every phenomenon was obscured which I am about to describe to you as occurring in the coma or simple apoplexy observed after a severe epileptic seizure.

And what do we observe? We observe paralytic laryngismus, impeded respiration, augmented apoplexy; we also observe—or rather, I have observed—*a diffused bronchial rattle*, the effect of *paralysis* of the bronchial and pulmonary branches of the pneumogastric!

Here a most interesting phenomenon presents itself. The cerebrum is not essential to *life.* How then does apoplexy, simple, cerebral apoplexy, destroy life? It does not do so. Apoplexy only destroys life when, by its congestion by downward pressure, it implicates the medulla oblongata and its pneumogastric nerve. It is by the apoplexy of this medulla and the paralysis of this nerve, that life is, in effect, destroyed!

Generally the patient dies of paralytic laryngismus, or of laryngeal asphyxia. From this danger he is rescued by early tracheotomy.

But if tracheotomy *be* performed, but performed too tardily, the

patient, however saved from *laryngeal* asphyxia, dies of *bronchial* asphyxia!

But I am anticipating the subject of the lecture of to-morrow.

There are other branches of the pneumogastric nerve—the cardiac and the gastric. The heart and the stomach participate in the paralysis of the general pneumogastric.

The observant physician will observe palpitation as a symptom in some cases of epilepsy. This is explained by excitement of the cardiac branches of the pneumogastric.

In other cases, there are hiccup, eructation, acidity of the stomach; the effects of the excitement of the gastric branches of this composite nerve.

As in these cases there is morbid *action* in the heart and stomach, so in deep epileptic coma there is *failure* of the powers of these organs.

The pneumogastric nerve is not more involved in epilepsy than in other convulsive diseases. All the phenomena just described as observe in the former, are again met with in the latter, only, of course, modified by the exciting causes, and the conditions of age and sex.

In infants there is the same or similar action of the muscles of the neck, and of the larynx and respiration. In puerperal convulsions the symptoms are identically those of epilepsy.

There is a form of epilepsy which I have not yet noticed. It is the *epilepsia syncopalis*. The patient, instead of turning purple, turns pale and ghastly. Sometimes this syncope is *fatal!*

So it is in the laryngismus stridulus of infants. The little patient not unfrequently dies suddenly—too suddenly to be the effect of asphyxia. The case of cardiac, syncopal.

Both these cases are affections [*shocks?*] produced through the medium of the pneumogastric nerve.

But, gentlemen, you remember that I spoke in my lecture of yesterday, of a *lower* medulla oblongata, and of a *lower* analogue of the pneumogastric. These, too, are influenced by the convulsive seizure.

The laryngismus stridulus is frequently excited by enteric irritation. This is also frequently attended by fret of the bladder.

Epilepsy is frequently induced by enteric and uterine irritation, and is sometimes attended by involuntary evacuations of the bladder, rectum, &c.

The urine is frequently morbid in both cases.

There is something in all this *analogous* to the modes of action of the medulla oblongata and the pneumogastic nerve.

It is obvious that both these portions of the nervous system form ONE. Both are liable to be affected in one and the same convulsive seizure.

Perhaps the *lower* portion of this system is most clearly isolated in what relates to *Obstetrics*. To excite the cervix uteri is frequently to excite abortion. To excite the cervix uteri during parturi-

tion is to excite the uterine efforts. But to excite the cervix uteri during parturition, is, also, frequently to excite a puerperal convulsion! These are facts familiar to every experienced pratitioner. They are *proofs* that "a meddlesome midwifery is bad."

Other facts of the same kind are constantly elicited in practice: to excite the rectum, by the pressure of the fingers backwards, excites uterine action; and it is well known that the excitement of the internal surface of the uterus by the hand, introduced in certain forms of hæmorrhage from inertia, excites the uterus to energetic contraction.

All this is accomplished through the *lower* medulla and its analogue of the pneumogastric.

I think that a subject very inscrutable hitherto will receive elucidation from these studies—that of sterility, inertia of the uterus, &c., &c.

The influence of the nerves and passions, with their course of action, their seat and their destination, their physiological and their pathological relations, forms also a most interesting subject of inquiry—a subject, however, to which I can only slightly allude on this occasion.

One point I wish to notice, in conclusion. I have, I trust, in unravelling the mystery of epilepsy, removed one of the *opprobria medicorum*. I hope, in my lecture to-morrow, to rescue this malady from the domain of *empiricism*, whether within or without the ranks of our profession.

(To be continued.)

Considerations on the Reciprocal Influence of the Physical Organization and Mental Manifestations. By A. O. Kellogg, M. D.

On the Importance of a certain amount of Physiological, Pathological and Psychological Knowledge to Parents and those engaged in the Education of Youth.

It is only within the last few years that the importance of physiology as a branch of popular education has been duly recognized, and even now, in most instances, it is assigned a secondary place, while others of far less practical importance, and sometimes even of doubtful utility, sanctioned by the usages and customs of past years, are clung to with an avidity disproportioned to their intrinsic merits, and incompatible with the progress of the age in which we live. It is not intended, in these articles, to cast disparagement upon any branch of popular education now in use in the schools, but to call the attention, particularly of those engaged in the education of youth, to others which have been too much neglected, and which experience and the present state of science have shown to be of equal, if not of paramount importance. The great mistake into which parents and teachers of the present day are apt to fall, is to suppose that the chief business of education is the de-

velopment of mind considered in the abstract, and to disregard that material medium through which alone it manifests itself. A system which would lead to the view of mind in the concrete, and which aims at the development of the whole man, physical, moral and intellectual, is the only system in harmony with nature, and the one calculated to bring about the greatest amount of good. It is somewhat surprising that, while almost all other branches of physical science have been seized upon with avidity and cultivated successfully, not only for their practical usefulness in the conduct of life, but as a means of mental development,—that, while metaphysical science, in all its dark wanderings, has been implicitly followed as the only guide to a correct understanding of mental manifestations,—so little attention has been given to the physiology and pathology of the brain as the organ of these operations, which, by its varying states of health and disease, its original perfection or imperfection is ever influencing them. Gregory Myssen, speaking of the different kinds of dreams, observes, "the brain may not inappropriately be compared to a stringed instrument, which, while its various keys are properly tuned, vibrates harmoniously; but, as soon as they become relaxed, or screwed down, nothing but discord is produced." Looking upon the brain, not as a unit, but as a congeries of organs, each subservient to some faculty of the mind, this comparison becomes particularly appropriate. Through these organs mind manifests itself, more or less powerfully or efficiently, according to their original and innate perfection, or their present depraved or comparatively perfect condition, as they may have been influenced by disease, education or other circumstances. In many cases this organism is so defective, as in congenital idiocy, as to derange entirely all the mental operations, and—but from the partially successful results of the labors of MM. Voisins and Valee, of the Bicêtre Hospital, Paris, and some others in the U. States, and elsewhere—to preclude all hopes of ameliorating their unfortunate condition by the cultivation of their imperfect faculties.

In others the organism is so delicately wrought, so exquisitely "toned," as to leave us in doubt where the physiological condition ends and the pathological commences; this state is compatible with the highest order of mental manifestations, the loftiest flights of imagination, and the most sublime conceptions of genius.

Dryden's lines, so often quoted, express a pathological fact which cannot be doubted, when we take into consideration the physical organization of many a child of genius:

> "Great wits to madness closely are allied,
> And thin partitions do their realms divide."

Individuals of this order occasionally work and sojourn with us for a brief space in this our sublunary existence, and their brief history—which consists in being seen, admired and mourned—is soon told; for the restless spirit—that "divinity which stirs within them"—soon frets away its frail and o'erwrought tenement, and

insanity soon casts over their brilliant intellects the shadow of its dark wing; or scrofula, in some one of its protean forms, lays their bodies in the dust, and the spirit passes away unincumbered to a more congenial communion of the "spirits of the just *made perfect*" in the realms of light and life.

Cowper, Keats, Pollock, Kirk White, and many others whose names might be mentioned, were beings of this order; but, certainly, the most remarkable examples of precocious genius, allied to that extreme delicacy of organization and excitability of the nervous system—which, if not a pathological condition, *per se*, passes into it almost imperceptibly—have occurred in our own country within the last few years.

We refer to the two sisters, Lucretia and Margaret Davidson, whose cases, for various reasons, seem to call for something more than a passing notice. These young ladies were the daughters of Dr. Oliver Davidson, of Plattsburgh, New York. The mother, from whom, undoubtedly, they inherited their delicacy of organization, is described as a woman of ardent temperament and uncommonly susceptible feelings. Lucretia was born in 1808, and died of consumption at the early age of 17, leaving behind her, in the amount of true poetry she has written, a monument to her genius seldom equalled and never excelled by one removed at so early an age. Dr. Southey, in the *Quarterly Review*, speaking of her poems, says, "There is enough of originality, enough of aspiration, enough of conscious energy, enough of growing power, to warrant any expectations, however sanguine, which the patrons and the friends and parents of the deceased could have formed." Her susceptibilities were so acute, and her perceptions of beauty so exquisite, as to cause her to faint when listening to some of her favorite melodies from Moore. Yet, notwithstanding this serious impression, she would beg to have them repeated, so delicious were the sensations produced. Her father, though a medical man, seems not to have looked upon this as a symptom or manifestation of incipient morbid action; for we are told, "as soon as she could read, her books drew her away from the plays of childhood, and she was constantly found absorbed in the little volumes her *father lavished upon her*. Notwithstanding, as appears from one of her later poems, she herself seemed conscious how near her mental condition bordered on insanity. We quote the lines referred to:

"There is something which I dread,
It is a dark and fearful thing,
It steals along with withering tread,
And sweeps on wild destruction's wing—

That thought comes o'er me in the hour
Of *grief*, of *sickness*, or of *sadness*;
'Tis not the dread of death—'tis more,
It is the dread of *madness*.

O may these throbbing pulses pause,
Forgetful of their feverish course!
May this *hot brain*, which *burning glows*
With all a fiery whirlpool's force,

Be cold, and motionless, and still,
A tenant of its lonely bed;
But let not dark delirium steal"—

Here the poem, so expressive of the fearful workings of the spirit within her, ends abruptly.

The education of this young lady appears to have been of that character best calculated to develop the intellectual at the expense of the physical powers, and to bring about the melancholy result which was so soon realized—a system too commonly pursued in similar cases, it is to be feared, at the present day. Instead of keeping her at home, and inducing her to forego, in a measure, her intellectual exercises,—to roam the fields and enjoy communion with nature in the free air of heaven,—to take exercise on horseback, and all other means calculated to strengthen her physical powers, and overcome a scrofulous taint of the system, the parents, proud of her extraordinary intellectual endowments, readily yielded to the suggestions of a friend, who, like themselves, only saw in her a mind which needed cultivation to develop the highest order of powers—overlooking the delicate physical organization to which it was linked—and placed her in a celebrated female seminary. Here the intellectual exercises she was compelled to undergo served but too rapidly to develop the germ of disease already sown, and caused it to grow with fearful rapidity. These and their deleterious consequences to herself and others similar to her in delicacy of constitution, are so admirably set forth in her verses on the "Examination," that we transcribe them:

"One has a headache—one a cold,
One has her neck in flannel rolled,
Ask the complaint, and you are told,
'Next week's examination!'

One frets and scolds, and laughs and cries,
Another hopes, despairs and sighs,
Ask but the caause, and each replies,
'Next week's examination!'

One bans her books, then grasps them tight,
And studies morning, noon and night,
As though she took some strange delight
In these examinations.

The books are marked, defaced and thumbed,
The *brains with midnight tasks benumbed*,
Still all in that account is summed,
'Next week's examination!' "

This could not last long, and in less than six months, according to the memoir, she was taken home in a dying state. Death, who loves a shining mark, had already selected his victim; and consumption, his most faithful ally—the insatiable foe, the implacable enemy of all that is lovely and pure, and beautiful and gifted, had stolen his march upon her—and seized and loosened the silver cord which bound her to the earth. The skill and kindness of her father, the affectionate tenderness of her mother, were of no avail. That kingdom which "cometh without observation" had been

early set up within her, and she was soon to put off the habiliments of her earthly tabernacle, in which she had sojourned but for a brief space, to be "clothed upon by that which is from heaven."

Here we draw the curtain over this sad picture of the unequal struggle between the intellectual and physical powers, to pass to the consideration of another, no less melancholy, no less interesting.

Margaret Miller Davidson, sister to the above, appears to have possessed the same delicacy of organization, the same fine-wrought sensibility of the nervous system, together with that scrofulous taint of the system which belonged, in so marked a degree to her sister.

Notwithstanding her education appears to have been more judicious than that of her sister, still it was insufficient to prevent the early development of the germ of disease she had inherited, favored as this was by that incontrollable bias towards extraordinary mental exertion, which must have reacted with fearful effect on the natural delicacy of her organization. In illustration of the wonderful activity of the child's mind, we quote the following anecdote of her: "During a visit to New York, the young poetess, having engaged herself for a private theatrical scheme, agreed to write a play. Several days had been spent in preparing dresses, scenery, and other accessories, when she was called upon to produce the play. 'O!' she replied, 'I have not written it yet. The writing of the play is the easiest part of the preparation; it will be ready before the dresses.' And in two days she produced her drama, 'The Tragedy of Alethea,' which, though not very voluminous, contained enough of strong character and astounding incident to furnish a drama of five times its size."

Notwithstanding the ease with which she said this could be done, still it could not have been accomplished by one so young without a fearful expenditure of vital power, and a constant repetition of this could but serve to hasten the fatal issue. Consumption, the old enemy, made its appearance, and in spite of all efforts to ward off the attack, she sank under its blighting stroke in Nov., 1838, aged 15 years and 8 months. The predisposition to consumption in these young ladies was so strong that it would undoubtedly have developed itself at some period of life, had the mental activity been less marked. But instances of death from this disease at so early an age are comparatively rare, and are in most instances the result of some marked exciting cause. Had they even possessed far less mental activity, but been subjected unwillingly to a severe task-masters, or to the rigid discipline of a boarding-school, and excited by a laudable ambition to excel at an examination, possessing at the same time that natural delicacy of organization and predisposition to disease, the result would, in all probability, have been the same. Here, however, the innate love for mental excitement—that *insanabile cacoœthes scribendi*—

was a sufficient task-master, and no rigid disciplinarian was required to goad them on to destruction. But these cases, detailed above, form an exception to a general rule.

We more frequently meet with youth of the same delicacy of organization and predisposition to disease, but whose restless activity and propulsive energy of character manifests itself in a different way, impelling them to physical rather than mental exertions; not that they are incapable, by any means, of extraordinary mental efforts, when urged upon them, for they master the tasks of their teachers without any apparent effort; but to them the only true science is the science of gymnastics, and the only true poetry the "poetry of motion." Their nervous excitability and natural buoyancy of feeling must break forth in some way, and most happy is it for the proper development of their physical organization, if this is only restrained within due bounds. The great mistake which parents and teachers of such youth are apt to commit is to suppose that, without rigid restraint, too much valuable time is lost which should be devoted to the cultivation of the understanding, naturally so active and brilliant. But the understanding, in these cases, aside from that rigid system of tasking and forced development too common, we fear, at the present day, seems, with proper and judicious direction, to develop itself almost intuitively. Such a mind, in the expressive language of Carlyle, "unfolds *itself*, and *becomes*, in some tolerable degree, what it is capable of being." Let us not be understood as applying this to all cases: the peculiar organization, physical and mental, to which these remarks are intended, we have attempted to point out; and teachers, to discriminate correctly, must study the character and peculiarities, mental and physical, of those committed to their care, assisted in this by a certain amount of physiological and pathological knowledge.

There is no disease we more frequently encounter, in connection with precocious mental manifestations, than scrofula; and it has been observed by some of the most intelligent and enlightened physicians of our country, that these affections, whatever form they assume, become exceedingly intractable, and generally result in the destruction of some one or other of the physical organs necessary to life, or so modify their healthy action as to render them peculiarly susceptible of disease; and when this diseased action is once established, their vital energy is so modified that they readily succumb. The late Dr. Brigham,* in his excellent little

* The personal history of this accomplished writer and eminent philanthropist furnishes one of the most striking illustrations of the truth of the doctrines he so ably discussed up to the time of his death, which took place just as he was passing the meridian of his days, deeply regretted, not only by the profession of which he was a brilliant ornament, but entire humanity, and particularly that branch of it devoted to the care and treatment of the insane. His life, from the cradle to the grave, was emphatically a life of ceaseless activity. During the latter years of it, while connected with the large establishment for the insane at Utica, no duty which he could discharge himself, and no responsibility he could assume, was ever delegated to

work on "The Influence of Mental Excitement and Cultivation on Health," has some remarks on this head that are so apposite that we deem no excuse is necessary for transcribing them.

"Dangerous forms of scrofulous disease," says he, "among children have repeatedly fallen under my observation, for which I could not account in any other way than by supposing that the brain had been excited at the expense of other parts of the system, and at a time of life when nature is endeavoring to perfect all the organs of the body; and, after the disease commenced, I have seen, with grief, the influence of the same cause in retarding or preventing recovery. I have seen several affecting and melancholy instances of children, 5 and 6 years of age, lingering awhile with disease from which those less gifted readily recover, and at last dying, notwithstanding the utmost efforts to restore them. The chance for the recovery of such precocious children is, in my opinion, small, when attacked by disease; and several medical men have informed me that their own observations have led them to form the same opinion, and have remarked that in two cases of sickness, if one of the patients was a child of superior and highly cultivated mental powers, and the other one equally sick, but whose mind had not been excited by study, they should feel less confident of the recovery of the former than the latter. This mental precocity results from an unnatural development of one organ of the body at the expense of the constitution."

The above is in accordance with my own observations during an active practice of ten years.—[*American Jour. of Insanity.*

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another: from the investigation of the most intricate of the many hundred cases of mental alienation which were daily presented to him, down to the construction of the simplest mechanical contrivance for the benefit of his patients, all must pass under his own immediate supervision. In answer to a remark of the writer, that unless he relaxed his exertions, he would, at no distant day, furnish an eminent illustration of the truth of his doctrines in his own person, he replied that he must work, and without labor he was unhappy.

This ceaseless activity, mental and physical, reacting upon a constitution naturally delicate, kept him in a constant state of ill health; yet he had no time to be sick, and the labor he accomplished in this state was truly astonishing. No one knew better than himself what must be the natural and inevitable result of such an expenditure of bodily and mental force, or has more truthfully described it; yet, to make a practical application of it to his own case he could not, so absorbed was he in his labor of love, and the fulfilment of his mission of good to his suffering fellow-creatures.

> But he stood
> 'Gainst that invisible and fellest foe
> Who striketh reason throneless, and the world
> Beheld him in his meek benevolence
> Seeking the lost, and on the broken mind
> Graving the name of healer.

And he continued to stand till his physical organization was completely worn out, and fell with his armor on, doing battle nobly "'gainst the invisible foe" he had combated so long and so successfully—and when the last enemy, dread and invincible, met him, he was found ready to yield up cheerfully to others that trust he had kept so faithfully himself into the hands of his Maker, and enter into his everlasting rest.

Illustrations of the Treatment of Fractures by the Starched Apparatus. By JOHN ZACHARIAH LAWRENCE, Esq., Surgeon to the Northern and Farringdon Dispensaries; late House-Surgeon to the University College Hospital.

It is not long that a very excellent treatise on this subject emanated from the pen of one of our most distinguished pupils, Mr. Gamgee. Yet the starched apparatus does not seem to have gained that ground in the London Hospitals that it so eminently deserves. The main objection I have invariably found Surgeons raise against its *immediate* application to recent fractures, is the danger of mortification that they suppose is incurred in the adaptation of a tight bandage to a part likely to become the seat of swelling. But those gentlemen seem to entirely lose sight of the essential difference that exists between the dead pressure of a bandage applied directly to a limb, and the same pressure exercised through the medium of a yielding elastic layer of cotton-wool, as it is in the starched bandage. That sloughing *will*, in rare instances, occur from causes that are often not very appreciable, is perfectly certain. A remarkable illustration of this occurred to myself. Two young children were, in the early part of my career as House-Surgeon, brought on the same day with the same accident, viz., fracture of the femur. Both were treated as out-patients, with the starched apparatus. One made an excellent recovery within a month; in the other, extensive sloughing of the foot and anterior part of the leg followed; on the separation of the sloughs the extensor tendons were found laid bare, the ankle joint opened into, and the first phalanx of the great toe necrosed; all this while the child became emaciated to the last degree, got incessant vomiting, and an attack of bronchitis; indeed, for some time its life was in such jeopardy, that I recommended amputation below the knee as the last resource; the parents, however, would not consent to this procedure, and as far as the ultimate result is concerned, proved themselves the better judges. After a time the child gradually began to regain flesh, and the wound to cicatrise over, the necrosed phalanx coming away in the discharge. At the moment I write the child is strong and hearty. The condition of the leg and foot is as follows. The only portion of the cicatrix that retains the character of scar, is a narrow line, extending down the outer side of the leg to the front of the ankle-joint; this has recovered the freest possible mobility. Where the phalanx detached itself, shortening of the great toe has occurred, but a perfect false joint has established itself between the metatarsal bone and the remaining phalanx. The only permanent deformity is some loss of substance of the soft parts of the lower half of the leg. The sole of the foot rests entirely on the ground, when the child stands; but the whole of the foot is slightly turned in. No shortening of the limb has taken place. I have thought proper to publish this case, from the conviction that it is not by a report of selected cases, intended to

advocate any particular plan of treatment, that this latter is advanced, but only by a fair and open recital both of the lights and shadows that it is ever likely to gain confidence. Independent of any reference to the subject in question the above case is a very striking one, illustrating, as it does, in so remarkable a manner, the high amount of reparative power enjoyed by the early frame.

One of the main advantages this plan of treating fractures of the lower extremity affords is, that it obviates that long, exhausting confinement in bed, which the ordinary plans of treatment imply. This disadvantage is not felt in fractures of the upper extremity; here all the starched apparatus has in its favour, is, that it is less irksome than wooden splints, and does not involve that "taking down" the fracture the latter every now and then require. I have used it in fractures of the humerus, even those implicating the elbow-joint, and found it answer well, as it did in two or three fractures of the olecranon. But in fractures of the lower end of the radius, both Mr. Hillier and myself were obliged to relinquished its use. Our experience leads us to the conclusion, that it is not adequate to maintain that efficient extension this class of fracture requires. Whereas of the many cases I have treated with the common pistol-splint, I have had only one attended with considerable stiffness and immobility of the joint after its removal. Patients express no discomfort from the pistol-splint, and it would be injudicious to expose them to the chances of a permanently painful and disabled limb for the sake of applying an apparatus which really in these cases can possess but little advantages, or rather, as I am inclined to believe, great disadvantages. At any rate, it should be employed with great caution in these cases, only in very young subjects, and where there is little or no tendency to any displacement of the fragments.

If there be any one class of cases in which the applicability of the starched apparatus might, *à priori*, be more called into question than any other, it is in oblique fractures of the femur, occurring in strong muscular subjects. A strong middle-aged workingman was brought into the Hospital with an oblique fracture of the femur, and the limb shortened to the extent of an inch. The fracture was at once put up in the starched apparatus, with a temporary long splint to maintain the extension made by assistants till the apparatus should have dried. On cutting this up, the shortening was found undiminished. Resolved to give the starched bandage a fair trial, I re-applied a new one, enforcing the most thorough extension during its application, and maintaining that extension for a while as before by the long splint. Yet, on cutting up the apparatus, shortening of an inch still existed, and I was forced to relinquish the starched apparatus, and have recourse to the long splint. Within a month the fracture had united with a firm callus, without any shortening; the patient could raise the limb freely from the bed, but could not bend his knee much with-

out considerable pain. The long splint was now thrown aside, and a starched apparatus applied from above the knee to the groin, and the man allowed to get about the ward on crutches, and in another fortnight walked out of the Hospital without any artificial support whatever, having entirely lost all stiffness of the knee. This case goes to show, that with no other means of keeping up the extension than those employed, the starched apparatus will not answer in a case of this description. It further illustrates the importance of not maintaining the knee-joint confined longer than is absolutely necessary. I was formerly in the habit, in all cases of fracture of the leg, of carrying the paste-board splints some inches above the knee; and in cases of fracture of the femur, of maintaining the apparatus from foot to groin to the end of the cure. Last June, a woman was re-admitted into the Hospital, after having previously been treated for a fracture of the femur in this manner. At the time she came under my observation the knee was swollen, stiff as cast-iron, and at times excruciatingly painful. The boy, Thomas Ponfirit (*Case* IX. of Mr. Gamgee's work), was an illustration of the same condition, though, no doubt, here the seat of the fracture was the main cause of the unfortunate result. I have seen several other instances of the same condition in a less degree; but the case of the woman first seriously attracted my attention to the fact, more than once, however, previously impressed on me by Mr. Quain; and since then I have always been in the habit of curtailing the splints to a little distance below the knee, in about a fortnight after first putting up the fracture in the starched apparatus. By this proceeding the efficiency of the apparatus will be by no means impaired, and all chance of a result happening avoided, which cannot but reflect discredit on the Surgeon, and misery on the patient.

The following case may be taken as illustrating favourably the application of the starched apparatus:—

A woman of dissipated habits had fallen from the parapet of a house on to some flag-stones from a height of some twenty or thirty feet. Both femurs were broken, the right transversely, the left obliquely, and her right shoulder-joint luxated under the coracoid process. After some difficulty the luxation was reduced, and both lower limbs put in the starched apparatus, two temporary long splints being applied. In the evening she began to exhibit very decided symptoms of delirium tremens, which, however, disappeared under the use of large doses of laudanum. When the apparatus of either thigh was cut up the limbs were found symmetrical and of equal length. A month after the accident both fractures had consolidated with very large, strong, provisional calli, and the two limbs were of the same length. A month after the patient left the Hospital, and continued getting about with the aid of a stick, but died about a year after the accident, from some inflammation of the chest, aggravated, no doubt, by the unheard of privations this poor woman suffered. Had she been in a better

class of life, no doubt she would have lived to walk about with comfort.

It is in fractures of the leg that the starched bandage finds its most advantageous application; indeed, I have no hesitation in saying, it is unequalled by any other form of retentive apparatus. A half imbecile old man was brought into the ward with a severe comminuted fracture of the tibia, and a simple fracture of the fibula. He was treated successively with three different splints, viz., Mr. Winchester's, M'Intyre's, and the fracture-box. Not one was equal to keeping the fragments in quiet apposition; and from the continued irritation, the man got into a most dangerous typhoid condition, when the starched apparatus was applied. Now, be it mere coincidence or not, he recovered without a bad symptom, and was discharged with the fragments united by a large firm callus. In this case there was a great tendency to the protrusion of one of the fragments of the tibia through the skin; and still more so in another oblique fracture of the tibia that was treated very successfully with the starched apparatus. Yet it is in this class of cases that the greatest prejudice will be found to exist against its use, "lest the fracture become compound." Now, I maintain, from what I have seen, that such a result is very much more likely to happen from the mediate crucifixion of the broken member by the M'Intyre splint than from the equable support afforded to it by the uniform casing given by the starched bandage. Of the many fractures of the leg I treated with the starched bandage, I may, before concluding, shortly advert to a case of Pott's fracture, which did exceedingly well. A young man, thrown in wrestling, got his ankle joint luxated outwards, and his fibula broken loosely about three niches from the joint, and the lower border of the inner malleolus splintered off. Two days after the accident he was about in the wards, and in three weeks made an out-patient. Fractures of the patella do very well if care be taken not to leave off the extending back splint too soon. I saw a case which, this precaution having been neglected, turned out very badly. Two cases which are detailed in my note-books were attended with admirable results; and I may say so with the more confidence from having seen the patients several months after the receipt of the injury.

I must state, that I intend the above remarks not as any detailed clinical expositon, but rather with a view of bringing a plan of treatment more prominently before the Profession, that they may feel more universally inclined to test the powers of one of the most admirable mechanical contrivances Surgery has produced.—[*London Lancet.*

Treatment of Tinea Tarsi.

The treatment which is the favourite at the Moorfields Royal Ophthalmic Hospital in this troublesome disease, consists in care-

fully taking away all scales and crusts, and then rubbing the edge of the lid with solid lunar caustic. The application must be repeated twice a week, and patiently continued. It is absolutely necessary that all deposit be cleared away, so as to allow the remedy to come in direct contact with the cuticle, the opening of the hair follicles, orifices of the Meibomian glands, etc. If the treatment be steadily persevered with, the redness subsides, the thickening of the lid is removed, and the hairs previously destroyed grow again. Mr. Critchett is accustomed to relate a case in which a fair set of eyelashes were reproduced, after they had been absent for many years. The disease appears to be much more frequently secondary to measles than to any other affection, and its subjects are generally more or less cachectic. It often varies remarkably with the condition of the patient's health. Tonics are, therefore, indicated, together with a liberal diet; but it is well proved that these, without local treatment, are not competent to cure the disease. At the Hospital for Skin Diseases, in several cases recently, the hairs and their bulbs have been examined with the microscope. It does not appear that any cryptogamic sporules are ever present, the structure of the hair being healthy. In pulling out an eyelash, the hair-sheath is generally brought away too, and on its exterior are numerous pus and exudation-cells, showing that the inflammatory action has been external to the hair-sheath. In this respect, the hairs resemble those of sycosis and of impetigo occurring on hairy parts of the face. Mr. Startin's treatment consists in smearing the edge of the lid every night with a mild mercurial ointment, (ammonio-chloride, 10 grains to the ounce), and administering an arsenical tonic in combination either with iodine or mercury.—[*Med. Times and Gaz.*

Croup.

The American Medical Monthly for August and September contains a long and interesting paper by Professor E. R. Peaslee, on *The Pathology of Croup, as the Basis of its Rational Treatment.* The article gives evidence of much thought and research on the part of its author, and we are sorry that we can do no more than give a mere outline of his ideas of the pathology of the disease and its treatment. This we do in his own words:—

1. An inflammation of the larynx, extending into the trachea, occurs; offering in its essential nature nothing different from any other case of inflammation of the same parts, either in the infant or the adult. It is generally preceded, in both infants and adults, by congestion and irritation, and therefore by catarrh.

2. An exudation of plasma occurs on the inflamed surface, as in the adult; this being most abundant, in the treachea, on the posterior wall.

3. This exudation may be disposed of in at least two ways, provided it is not at once removed, as it generally is, in adults but

not in infants, by coughing; reabsorption probably very seldom occurring in this disease, though it is not impossible.

a. It may become degenerated into pus (purulent matter), and thus, of course, at once be detached, which is the most common result.

b. It may become organized into a false membrane. This is more probable if the blood is rich in fibrin (*e. g.* in a plethoric child); if there is but little cough (an adult generally expelling it thus), and if time is allowed for its development (less being required in the child than in the adult).

4. Croup is, therefore, merely a laryngo-tracheitis in infants and children, and offers nothing essentially different from the same inflammation in adults.* The exudation in case of adults is, however, usually at once ejected by couging, or in the form of purulent matter; while the liability to its organization in infants is greater; though, after all, a comparatively rare result, considering the whole number of cases—for the reasons before mentioned.†

5. Practically, therefore, as well as pathologically, we cannot say with Bouchut: "*Without a false membrane croup does not exist.*" This membrane never exists till the inflammation—the essential element of the disease, as we believe—has preceded, and has produced the exudation of plasma, as before shown. No sooner does the catarrhal *irritation* merge into inflammation, than the plastic lymph is thrown out;‡ and this *inflammation and its accompanying exudation* are the elements always present in croup.§

We therefore need not, for any practical purpose, admit an "inflammatory and a membranous" croup, as some writers have done, any more than we should make the same distinction in regard to pleuritis or peritonitis. All croup is *inflammatory*, at any rate; and a few cases are also accompanied by the formation of a false membrane. But the latter should not affect the treatment of the disease as an inflammation, but merely from its mechanical effects, and cannot be predicated in any case till it is actually seen; and this is not possible in most cases in which it is developed at the very onset of the disease.

Finally, we would drop the term croup entirely, and use the term laryngo-tracheitis instead. In a work on the diseases of children, we would call particular attention to the fact that a false membrane is formed in about one-sixth of all the cases of this disease; while in adults, this is of very rare occurrence. But we would not make an accident the distinguishing feature of this disease, more than we do in the case of others, nor allow it to enter into either our name or our definition of it.

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* The idea of Copland and others, that the false membrane in infants is due to a greater amount of *albumen* in the blood, is entirely without support.

† In Dr. Ware's "Contributions to the History and Diagnosis of Croup," false membrane was found in only 22 cases out of 131, or about one-sixth of the whole.

‡ Hasse's Diseases of Organs of Circulation and Respiration, p. 277.

§ Dr. H. Green also holds this idea, though in different terms. See his work on Croup, p. 13.

As in all other inflammations, so in this; the distinction of "sthenic" and "asthenic" is important, both in a pathological and a therapeutical point of view. So far also as laryngismus enters into any particular case—and it does into all cases of true laryngitis to some extent—the case is, of course, *spasmodic;* but this term must not be applied to the exclusion of the idea of inflammation. *Genuine spasmodic* croup, we have already seen, is a mere laryngismus. There is more or less spasm in all cases of bronchitis, and still more in whooping-cough; in the latter case in the larynx also; so that infantile laryngitis does not present any peculiarity in this respect. *Catarrhal* infantile *laryngitis* we regard as a contradiction of terms.

The treatment he recommends for the two forms of the disease is presented in the following tabular form:—

	Sthenic Laryngo-tracheitis.	*Asthenic Laryngo-tracheitis.*
I. To arrest the inflammatory process, and control the laryngismus.	An emetic, followed by a full dose of calomel, if required.	Do. do.; or pil. hydrargyri, instead of calomel.
	Leeches to throat, or over the sternum; followed by cold applied continuously.	Leeches doubtful. Cold continuously applied.
	Tartrate of antimony; sedative doses, cautiously administered.	Nitrate of potassa.
	Internal application of solution of nitrate of silver.	Do. do.
	Inhalation of aqueous and narcotic vapors.	Do. do.
	Opiates, with caution. Hydrocyanic acid, do. do.	Do. do.
II. To prevent organization of the exuded plasma.	Sponge-probang and caustic solution.	Do. do.
	Expectorants.	Stimulating expectorants.
	Calomel, in small doses.	Turpeth mineral.
	Alkalies.	Do.
	Counter-irritation.	Do.
	Tracheotomy?	
III. For removing the false membrane when formed.	Continue caustic solution.	Do. do.
	Do. expectorants.	Do.
	Do. counter-irritation.	Do.
	Do. alkalies.	Stimulant alkalies.
	No emetics, or calomel.	Do. do.
	Tracheotomy, *seasonably*, if at all.	Do. do.
IV. To sustain the strength.	Milk-porridge, arrow-root, broth, &c.	Do. do.; also wine whey, milk punch, &c.
	Tonics, if required.	Tonics and stimulants.

New Instrument for producing Compression in Orchitis. By T. L. Ogier, M. D., of Charleston. S. C.

Messrs. Editors:—I send you the following description of an invention of mine, which, if you think worthy, insert in your journal.

The treatment of orchitis by adhesive straps, applied so as to exercise a gentle pressure on the gland, is, I believe considered by surgeons, a great improvement to the old plan of leeching, fermentations, cold applications, &c.—the bandaging giving immediate relief from pain, and reducing the swelling considerably in a few hours, and this without confining the patient to his bed.

In treating cases of orchitis, I have found the swelling so much reduced the morning after the straps were applied, that they no longer gave any support, to the testicle, and therefore, to be efficient, had to be reapplied every ten or twelve hours, or oftener; for as soon as the pressure of the plaster is taken off of the gland, by the latter becoming smaller, the straps no longer act beneficially, and the curative process is arrested until a fresh support is given to the swelling by a reapplication of the dressing. Now, this constant reapplication of the straps is troublesome and painful, and if not attended to as soon as they become loose, no longer give any support to the enlarged gland, and the cure is protracted.

To remedy this defect, it seemed to me that an elastic pressure exerted gently on the swelling, would be efficient—a pressure that would be constantly exercised on the swelling, notwithstanding it became reduced in size. For this object I had made an oval bag, about the size of a turkey egg, netted of thin india-rubber thread—the body of this bag was netted with pretty coarse meshes, so as to be open and cool, but the neck was netted much closer and finer. When this is stretched open and the testicle put into it, the pressure, on account of the closer work (around the mouth of the bag) is a little greater than it is elsewhere—it therefore remains on perfectly well, and there is a gradual and gentle pressure exerted over the whole gland, until the swelling is completely reduced.

I have treated four cases with perfect success, and with little inconvenience to the patient. In the process of the treatment the patient can take it off for a little while to bathe, or for any other purpose, and reapply it himself without any difficulty.—[*Charleston Med. Jour. and Review.*

Self-adjusting Stethoscope of Dr. Cammann.

We have the pleasure of presenting our readers with a description and an engraving of a double self-adjusting stethoscope, recently invented by George P. Cammann, M. D., of this city. Dr. C. has been long known as having devoted himself, with much success, to the study of affections of the chest. The mode of investigation of disease under the name of "auscultatory percussion," first made known by him and Dr. A. Clark, and published in the *New York Journal of Medicine and Surgery*, vol. iii. (July, 1840), established his reputation in this respect.

The stethoscope of Dr. Cammann presents, as will be seen by the engraving, an objective end, made of ebony, the extremity of

which is about two inches in diameter, two tubes composed of gum-elastic and metallic wire, two metallic tubes of German silver, two ivory knobs at the aural extremity, and a moveable elastic spring, so arranged as to adjust it, and keep it in its proper position.

M. Landouzy, of Paris, previous to 1850, formed a stethoscope having a number of gum-elastic tubes, by means of which several persons could listen at the same time. Dr. N. B. Marsh, of Cincinnati, in 1851, patented a stethoscope with two gum-elastic tubes, and a membrane over its objective end. Dr. Cammann does not, therefore, claim any originality on account of the two branches of his instrument, but on account of other advantages which it possesses. The instrument of M. Landouzy was not found of any practical use. The objections to that of Dr. Marsh are:

1. That the aural extremity is composed of roughly-cut India-rubber, without anything to adapt it to the ear, which both causes irritation and does not exclude sounds from without.

2. That it requires both hands to keep it in position.

3. That it gives a loud, muffled, and confused sound, caused by reverberation within the instrument, in consequence of the drum at the objective end and the inequality of the diameter of the bore. These circumstances render it of but little practical value.

The only resemblance between the instrument of Dr. Cammann and that of both Drs. Landouzy and Marsh is, that each is composed of more than one tube.

On reference to the engraving of the stethoscope of Dr. Cammann, which represents the instrument of one-third its size, it will be observed that the bell-like expansion of the objective extremity will be two inches in diameter, with a convolvulus excavation, gently curving outwards, to present a rounded edge to the chest, in order to prevent causing pain to the patient. The bore of the instrument is two and a half lines in diameter, care being taken to have it made smooth and even.

The tubes are made of German silver, with a double curve towards the aural extremities, which curves require to be constructed with great care, so that the ivory knobs may rest closely upon the external openings of the ears.* When applied, it is necessary that the orifices of the knobs should point upwards. Some of the instruments are constructed with a spiral, and others with an elastic spring, as shown by the plate. Some of them are so arranged that they can be disjointed, to render them more portable.

One point, heretofore *sub judice*, is settled by this instrument, viz., that the sound is conducted entirely through the air, and not at all through the media, as these were, for experiment's sake, changed nine or more times, without affecting in the least the intensity of the conducted sound. On making the objective end solid, all sound was lost.

* If any peculiarity of formation of the head of the observer prevents their thus resting, so as to exclude all external sounds, they should be carefully bent to give the required curve.

The advantages claimed for the instrument of Dr. Cammann are:—

1. That being applied, it adjusts itself closely to both ears, excluding all external sound.

2. It leaves both hands of the examiner free.

3. It gives sounds pure, and greatly increased in intensity, though differing in quality from those hitherto afforded by auscultation, the pitch being lower. This intensity is produced by both ears being acted upon at once, by the ear-pieces of the instrument fitting closely into the meatus of both ears, and by the smoothness and careful construction of the bore of the stethoscope as to curves, &c., according to the law of reflected sound.

4. Sounds not heard through the instrument in common use can be detected by this.

5. Sounds which are doubtful by ordinary instruments are made perfectly certain. Even when disease is seated in the central part of the lungs, they can be detected, when the ordinary stethoscope will fail to render them recognizable. The same advantages are obtained in examining the morbid sounds of the heart.

The great increase of intensity of sound by this instrument renders it valuable to those with impaired hearing.

In the use of this stethoscope it is necessary that the chest should be uncovered, to prevent all friction between it and the clothes; otherwise the sound thus generated is conducted with such intensity as to embarrass the examiner. A short practice may be required to become familiar with it, in consequence of the increased intensity of the sounds produced by it, and the difference between them and those afforded by ordinary auscultation. Many of the recognized physical signs of thoracic disease will be so modified as to be new to the examiner, but a short experience will enable him to appreciate them, and give them their true value.

These stethoscopes are manufactured and sold by Messrs. George Tieman & Co., No. 63, Chatham street, who pay particular attention to their construction—a point very essential to an instrument of this kind.—[*New York Medical Times.*

Case of Malformation and Displacement of Organs. By Stephen Wood, M. D.

At 9½ o'clock P. M., on the 15th inst., I was called to attend the wife of J. W——, in labor, at No. 37 M—— street. The head presenting favorably, labor was speedily completed. The child, a female, was of ordinary size, and externally well formed. It cried for a few moments after birth, made several peculiar, convulsive-like *attempts* at respiration, for *legitimate* respiration it could not be called; but these soon ceased. On now applying my hand over the region of the heart, or rather where pulsation of this organ is usually felt, I could not find any; but, in moving my hand over different portions of the chest, and placing it on the right

side, I there discovered a strong pulsation a little below, and to the right of the nipple of that side. This continued for some fifteen or twenty minutes. I now thought it best to try artificial respiration to restore life; and this failing, made use of other means for that purpose, but all without effect. I then made up my mind that there was serious derangement of the thoracic organs, on account of the singular location of what appeared to be the cardiac pulsation, and because of the impossibility of producing natural respiration.

On post-mortem examination of the body next morning, the following was the condition of things: The external surface presented a general livid hue. Internally, I found the *heart* of usual size, inclosed in its pericardium, in the right side, directly under where I had felt the beating, and extending from the third to the eighth rib. The *lunys* were very small, and solid, like liver, lying immediately posterior to the heart, and compressed between it and the ribs behind, apparently also completely impervious; these two organs taking up but a portion of the right side of the thorax. Commencing at the upper part, and in the order enumerated below, the remaining portion of the right, and the whole of the left side of the cavity of the chest were occupied by, *first*, the *small intestines; next*, a part of the *large intestines; then*, the *stomach*, the *gall-bladder;* and lastly, the lower lobes of the *liver;* this organ, as well as most of the others mentioned, being in an inverted position. The remaining part of the liver, and the other portions of the large intestines containing meconium, nearly filled the cavity of the abdomen.

The *mediastinum* and the left half of the *diaphragm* were wanting. It was through the openings caused by these deficiencies, that the abdominal organs mentioned above passed into the chest, and produced the displacement of the lungs and heart. The functions of the larynx and trachea, from the remarkable situation of the other organs, must have been seriously interfered with.

The death of the child, I suppose, was mainly owing to the fact that respiration could not be properly performed—the organs concerned in this act being unfitted for their office. But had the lungs been pervious to air, it is not probable that, with such general displacement and malformation, life would have been much longer maintained.—[*New York Med. Times.*

Treatment of Prolapsus Ani with the strong Nitric Acid. By J. H. Broxholm, M. D., &c.

Having seen several cases of prolapsus ani treated successfully by the application of the strong nitric acid, it gives us much pleasure in being able to testify to its efficacy in cases of that description, having treated several lately with the acid, some of them of very long standing, accompanied with piles, which at times bled profusely. If not infringing too much on your valuable columns,

may I beg the favour of your inserting two cases selected from a number treated by me; all of them, I may say, most satisfactorily, no relapse having occurred in any one case. I was consulted, on October 6, by Mrs. C., residing in my neighborhood, the mother of five children, for prolapsus ani, complicated with hæmorrhoids, which at times bled profusely for several days together. She informed me this state of things had existed for the last five years, obliging her at times to lay up for several days, and compelling her to reduce the prolapsed parts five or six times daily, the parts coming down while walking even the least distance, and causing acute pain until returned. She says she had always enjoyed good health, and should not have consulted a medical man was it not for this intolerable nuisance, rendering life, according to her expression, a misery and burden to her. On examination, I found the parts very much prolapsed, excessively vascular, and tender to the touch, the piles being of a purplish red tinge, from congestion, and the mucous membrane very much relaxed. I applied the acid on the following day, and preparatory to replacing the parts after applying the acid, I smeared them well with the ung. cetacei. The pain was trifling, and soon passed off. On examining the parts, five days after the application, there was not the least appearance of prolapse, the parts all being now within the external sphincter. The piles no longer existed, the inflammation set up no doubt having produced absorption of their contents, with obliteration. She informed me that no prolapsus had occurred since the application, either after defecation or walking, as she was now able to take long walks with ease and comfort.

The next case occurred in a gentleman somewhat advanced in years, residing in the City. He consulted me on the 18th October, informing me he had been suffering from prolapsus ani for the last three years, accompanied at times with considerable hæmorrhage from the relaxed mucous membrane. He had enjoyed very good health till lately, when, owing to the large size of the prolapsed parts, he had been compelled to remain in-doors; the pain being very acute, and compelling him to replace the parts several times a day, and that considerable force was requisite to reduce them. Having tried various remedies without relief, he fully made up his mind that his complaint was incurable. On examining the part I found the mucous membrane enormously protruded, being exceedingly vascular, of a dark red colour, and highly sensitive; several piles protruded with the mass. I applied the acid at once freely to the prolapsed parts and piles. Of course the pain was very acute for a few minutes, but soon subsided; and after smearing the parts with ung. cetacei, I replaced them.

On examining the parts six days after, the effects were truly surprising. No prolapsus now existed, and he was able now to walk without the least pain or inconvenience; and he has remained perfectly well up to the moment of writing this.—[*London Lancet.*

Case of an Extra Uterine Fœtus, Retained Forty Years. Reported by JOHN A. CUNNINGHAM, M. D., Richmond, Virginia.

Among the many remarkable cases of extra uterine pregnancy found scattered throughout the various works on obstetrics, and which have been nowhere so well grouped, as in "Dr. Campbell's memoir on extra uterine pregnancy," published in Edinburgh, 1840, we have never met with any better deserving to be placed on record than the one occurring in our practice during the past year, a short description of which we here give.

During the spring of 1853, we were desired to visit an old negro woman, who had been the cook for one of the largest families in this city for probably fifty years, and whose office during that long period of time had certainly been no sinecure. After serving in this capacity as long as she was able to perform its duties, she was now at the advanced age of eighty or eighty-five, a superannuated dependent on her master. As is common with negroes, she did not know precisely how old she was, but we think that the estimate of her age we have made, is correct. Although her mind was somewhat impaired, yet her health, which had always been remarkably good, had only given way in the last few months; and it was for the purpose of rendering her professional aid that we were asked to see her.

We found the old woman's general health quite good, although she was somewhat enfeebled by a long continued pain in the loins, accompanied by great irritability of the rectum and anus, with a constant tendency to stool, and she complained greatly of the tenesmus and straining which she had suffered with for some time.

There were no reasons to lead us to suspect what afterwards turned out to be the true condition of things, and we therefore treated her for the rectal irritation, and in the usual way, but without giving her any relief. The discharges from the bowels became offensive and filled with purulent matter, and at last we were astonished to hear one morning from her nurse, that the old woman had been for some days passing bones of different sizes and shapes, none of which she had preserved. She was at once instructed to keep whatever substances of that sort she might evacuate from the rectum; and in a day or two she brought us quite a number of bones, evidently those of a fœtus, completely denuded of flesh, and surrounded by a slimy and purulent material. These bones which were collected for some time, and some of which we now have, are mostly the phalanges of the fingers and toes; others are evidently the heads of the long bones imperfectly ossified, and some apparently portions of the pelvis and other of the flat bones. This poor old creature still lives, but is gradually sinking under the weight of her infirmities, and continues to discharge at times, bones of different shapes, but all evidently belonging to the fœtal skeleton.

We enquired of the patient whether she had ever thought herself pregnant and afterwards believed herself mistaken, but so old

was she, and with a mind so impaired, that she remembered nothing which could be made to bear upon the point. The only fact of interest was elicited from a fellow servant who had lived with her many years, and who informed us that the cook had often complained of having a tumour in her belly which troubled her. This tumour upon examination we found had disappeared. We ascertained however, from her owner, that she had been the mother of several children.

We think, then, it may be stated beyond dispute, that in this woman we had a case of extra uterine pregnancy, which after remaining in abeyance not less than *forty years*, and interfering but little, if at all, with her general health, had at last been discharged by ulceration of the sac which contained it, forming a fistulous opening into the rectum, and giving rise to all the symptoms to which we have alluded.

[Dr. Campbell's essay, alluded to above, gives some cases shewing the great length of time that a fœtus may remain in the abdomen, producing comparatively but little distress, which are equally remarkable with the one just reported. He has collected from various sources, seventy-five cases of extra uterine pregnancy, where the fœtus was retained for periods varying from three months to fifty years; one case to fifty-two years; one to fifty-five and one to fifty-six years.

Denman in his 13th plate delineates an extra uterine fœtus that had been conceived thirty-two years before the death of the mother; and in the Hist. d l'Academie Royale des Sciences, an instance is recorded of a woman who conceived at forty-six and lived until ninety-four, when an ossified fœtus was found in her abdomen, consequently she must have carried it forty-eight years.—*Editor Virginia Med. and Surg. Journ.*]

EDITORIAL AND MISCELLANEOUS.

Local Anæsthesia in Surgical Operations.—Since the case reported in our last number of this journal, in which a large fungus was removed from the arm under the anæsthetic influence of a frigorific mixture of salt and ice, I have had the opportunity of again testing the efficacy of this process in a number of cases. On the 14th January, a fungous growth occupying a large portion of the dorsum of Mr. T.'s hand, was removed, after freezing the surface, with very little pain. On the 25th of the same month, the freezing mixture was placed in a long and narrow bag of gauze and carried around the neck of a lipoma about the size of a man's head, which hung from the back of a negress. The solidification of the skin and subcutaneous adipose tissue was complete in four minutes, and the tumour extirpated with so little pain that the patient was quite surprised when she heard it fall to the floor. She declares that she suffered most during the application of the stitches and adhesive strips. On the 2d February, another

lipoma the size of a turkey's egg was removed, in like manner, from the anterior portion of the thorax. On the 6th of February, a lady presented herself with a tumor as large as the two fists of a man, attached to the perineum and side of the vulva. This could not be surrounded by a collar of freezing mixture, and was therefore removed under the influence of chloroform inhalation. On the 16th of the same month, the freezing mixture was applied to the face of Mr. E., for the extirpation of an epithelial tumor of the cheek, the size of a small egg. In consequence of the salt and ice having been mixed too soon, some delay occurred in the application, and the freezing was imperfect. The patient therefore suffered much more in this case than in those above reported.

In all these cases, adhesion by first intention was complete, and in neither did the patient complain of any pain during or after the application of the freezing mixture. Yet, I perceive that some of those who have resorted to this process allege that the reaction which follows such freezing is sometimes quite painful. Such is not my experience.

I cannot close these remarks without again directing attention to this as an important substitute for the more dangerous inhalation of anæsthetics. It is applicable to a very large number of the cases requiring surgical intervention, and must therefore correspondingly limit the number of those in which the surgeon might be justified in resorting to other means. It lessens the amount of hemorrhage to a remarkable degree; a very important consideration in some cases.

It is not pretended that anæsthesia, thus induced, is complete to the depth we may have to cut in the removal of large tumors; but it is nearly or quite so in the skin, which is the most sensitive tissue we have to divide in such operations. L. A. Dugas.

Augusta, 22d February, 1855.

Dr. Cammann's Stethoscope.—We are happy to be able to present our readers an engraving and description of Dr. Cammann's Stethoscope, inasmuch as we regard it a very important addition to our means of diagnosis. Dr. C. has for many years been one of the most able and zealous advocates of auscultation in our country, and published, as far back as 1840, in connexion with Dr. A. Clark, the results of the ingenious combination of auscultation and percussion, by which many obscure questions in diagnosis were made of easy and certain solution. As no prescription can be safe that is not based upon correct diagnosis, and as this is by far the most difficult portion of the study of medicine, any contribution calculated to facilitate its acquisition must entitle the author to the gratitude of the Profession. We verily believe that the "auscultatory percussion" of Drs. Cammann and Clark, and Dr. Cammann's new Stethoscope, constitute the most valuable improvements in the diagnosis of thoracic affections made since the days of Laennec, in this or any other country.

The Chloroform Vapour Douche.—Since our publication of Dr. HARDY'S experience in the treatment of various affections by means of the chloroform vapour douche, we have received a number of letters of inquiry in relation to the process and apparatus used by Dr. HARDY, and we beg leave to publish the reply to our correspondents for the benefit of such of our readers as may feel interested in the matter.

We have not seen either of the two instruments recommended by Dr. H., but have examined the engravings of both as contained in the British periodicals. One of them is very simple and is that which will therefore be most generally used. "It consists of a small metallic chamber containing within it a sponge for holding the chloroform, having at one end a gum-elastic bottle, and at the other a pipe (containing a valve) for transmitting the vapour. At the distal end of the chamber is a second valve, to admit atmospheric air into the gum-elastic bottle. The sponge in the chamber is charged with chloroform by a screw stopper." It will thus be seen that this apparatus may be extemporized by interposing a tin box to receive the sponge between the canula and bottle of an ordinary gum-elastic enema bottle of large size. A small mustard box or a 2 oz. vial with its bottom broken off might answer the purpose of this sponge chamber. The absence of valves and screw stoppers would not materially impair the usefulness of the instrument, as the chloroform might be poured upon the sponge through the canula if this could not be conveniently removed, and the ingress of air into the bottle through the canula would only charge it the more highly with chloroform, by being made to pass twice instead of once through the sponge chamber, before being brought in contact with the tissues. But even this might be obviated, by having a small aperture upon the side of the chamber, which could be closed or not with the finger, at will.

About a teaspoonful of chloroform is poured upon the sponge just before using the instrument. The canula being then directed to the desired surface, the bottle is alternately compressed by the hand and relaxed so as to drive a current of the air thus charged with chloroform vapour against the part. This air jet or douche, as the French term it, may be continued two or more minutes, according to the effect, and be repeated at such invervals and as often as the case may require.

The other apparatus designed by Dr. H., is much more complicated, and is calculated to afford a large and continuous supply of vapour, combined with hot or cold air, or with aqueous vapour.

"The main part of the instrument is a bellows constructed partly of vulcanized india-rubber. This bellows is furnished with two sponge-chambers for chloroform, one on the under surface where the air is admitted, and the other at the mouth where the air is expelled. This second chamber is provided with the nozzle, to which is affixed, by means of a screw, a chamber, constructed like an harmonicum, and made to react upon the jets of

vapour escaping from the bellows, and convert them into a continuous stream, by means of an India-rubber ring passed round it. This elastic chamber is provided with an escape tube, furnished with a stop cock, upon which tube are screwed conveyance-pipes of various kinds according to the locality to which the application is to be made. If it is wanted to apply the vapor of hot water along with the chloroform, the inferior sponge-chamber of the bellows is screwed upon the escape-opening of the jar. This jar is filled half full of hot water, the temperature being kept up by a spirit-lamp, if necessary, and regulated by a thermometer suspended from a hook in the interior. On working the bellows, the air enters this jar through the entrance-tube, becomes heated in passing through the water, and at the same time charged with watery vapor; enters the bellows through the escape-opening, and so passing out through the elastic chamber, becoming charged with chloroform in its passage through the sponge-chambers. If much chloroform is wanted, this jar may be made to hold chloroform instead of water, and so the air may be partly charged with this vapor before it reaches the sponge-chamber. If it is desirable to apply the chloroform along with cold air, the inferior sponge-chamber of the bellows is screwed upon the end of a long coil of tubing, which coil is immersed in a freezing mixture. The air, entering this coil at its free extremity, becomes cooled in its passage before it arrives at the bellows."

Our city apothecaries have not yet procured any of these instruments, but inform me that they will order them for any physican who may request them to do so. The first or simple instrument described cannot be costly, but the other must be much more so.

Seventh Volume of the Transactions of the American Medical Association. New York: C. B. Norton. 8vo., pp. 668.

We have but recently received this volume, and find upon a hasty glance over its pages, much interesting matter. The paper of Dr. F. P. Porcher, "On the Medicinal and Toxicological Properties of the Cryptogamic Plants of the United States, evinces a great deal of research, and is an exceedingly valuable contribution to science—one which reflects much credit upon its learned author. The Prize Essay of Dr. D. Brainard, "On a new method of treating Ununited Fractures and certain Deformities of the Osseous System," is also a valuable paper, and bears the impress of an original and discriminating mind. Dr. B.'s method is ingenious, simple, and will doubtless be generally adopted hereafter in the management of these difficult cases. Besides these two papers, which occupy 166 pages, we have 128 pages devoted to three Reports on the Epidemics of Kentucky and Tennessee, of Ohio, Indiana and Michigan, and of Louisiana, Mississippi, Arkansas and Texas, for the year 1853. These are ably drawn up, and may be useful in History, but we doubt that such documents can ever be worked up into anything of practical value. The causes of disease are so obscure, and the types and character of epidemics vary so much, that such histories can scarcely ever be looked to as guides in the prevention or management of subsequent visitations.

This volume contains another Report, upon the never ending subject of Medical Education. It reiterates the suggestions and recommendations so often already and fruitlessly made. We say fruitlessly made, for we feel assured that the standard of Medical Education is lower now than it was at the time of the organization of the association. We think it high time that this learned body desist from attempts to legislate without the power to enforce, and confine its labors to the simple promotion of contributions to science. In a country like ours, evils have to work their own cure. We should not therefore despair.

Deaths from Chloroform.—Dr. G. Huff, of Lexington, Ky., reports the death of a lady from the inhalation of chloroform for the relief of neuralgic pains. Another death has occurred in Guy's Hospital, (London), the victim being a female whose leg was to be amputated by Mr. Birkett.

Mortuary Statistics of New York, Philadelphia, Baltimore and Boston in 1854.—We find in the Medical News, the following tables:

RATIO OF DEATHS TO POPULATION OF 1850.

	Deaths in 1854.	*Population of* 1850.	*Ratio of Deaths to Inhabitants.*
Philadelphia, - -	11,811	409,000	1 to 34.63
New York, - -	28,458	515,000	1 to 18.09
Baltimore, - - -	5,738	170,000	1 to 29.62
Boston, - - -	4,418	137,000	1 to 31.00

RATIO OF DEATHS TO PRESENT ESTIMATED POPULATION.

	Deaths in 1854.	*Estimated Population.*	*Ratio of Deaths to Inhabitants.*
Philadelphia, - -	11,811	500,000	1 to 42.33
New York, - -	28,458	625,000	1 to 21.95
Baltimore, - - -	5,738	210,000	1 to 36.59
Boston, - - -	4,418	160,000	1 to 36.21

Abuse of Chloroform in Midwifery.—Dr. Robert Lee has forwarded to us a letter from Mr. E. Parke, of West Derby, from which we select the following passages: "The profession and the fair sex owe you a deep debt of gratitude for your manly, able, and convincing paper on the subject of chloroform and its attendant dangers when administered during parturition. At one time I used to give it frequently, but latterly I have suspended it, from careful and unbiased judgment as to its baneful results. I never had but one nearly fatal case; but in many I have had to deplore its effects; and the little amount of good derived in some cases from it, is sadly out-weighed by its concomitant dangers. As you have given seventeen cases, I think every medical man is in duty bound to assist you in putting down its indiscriminate use in midwifery, and entering his most serious protest against it. In the year 1849, Mrs. M. engaged me to attend her in her third confinement, and having suffered rather seriously in her previous ones, she begged of me to administer chloroform. It was a case of twins, and when the first was born she felt exhausted and fatigued, and finding the

arm of the second child was presenting, and turning would be necessary, I though it probably might be of service. I avoided carrying it to insensibility, and she was perfectly conscious of all that passed during the operation; and when over, expressed herself most grateful for the 'blessing of chloroform. She had scarcely given vent to her feelings, when she complained of a violent pain in her head, became delirious, tore the nurse's gown and the bed-curtains into pieces, and was perfectly maniacal. Flooding came on to a fearful extent, and incessant sickness. I managed to extract the placenta, and owing to the feeble contraction of the uterus (and this latter condition I am confident it often produces), I was kept grasping it for four or five hours. The vomiting continued eight hours without intermission, the headache remained for weeks, and her recovery was very protracted, far more so than on former occasions."—[*Med. Times and Gaz.*

Extraction of Foreign Bodies from the Œsophagus.—M. Nelaton has collected with care the various modes of procedure for the extraction of foreign bodies arrested in the œsophagus, and he, in particular, examines the mode of extracting fish-hooks, the removal of which is a matter of great difficulty. In speaking of œsophagotomy, this skillful surgeon proposes a proceeding, which, according to him, is simpler than any other operation. Instead of making a lateral incision, M. Nelaton divides the integuments in the median line, as is done in tracheotomy, but making a more extended incision; he then separates, to the same extent, the sterno-hyoid muscles, so that they can be drawn apart by blunt hooks, or, if necessary, divided transversely, in order to give more space; that done, the isthmus of the thyroid body is laid bare; beneath it is passed a blunt needle, carrying a double thread, in order that two ligatures may be applied; between the two ligatures, the isthmus of the thyroid is divided. The trachea being thus laid bare, the left lobe of the thyroid is separated from it by a blunt instrument, keeping, at the same time, close to the trachea; at the bottom of this cleft, between the trachea and thyroid, the œsophagus is necessarily found, and is to be opened in the ordinary way. By acting thus, all risk of wounding the large vessels of the neck is avoided, and the operation may be performed without injuring the thyroid arteries.—[*Elements de Pathologie Chirurgicale. N. Y. Journal of Medicine.*

Extraction of a Tobacco-pipe from behind the Ear.—Mr. Henry Smith showed the Medical Society of London, a portion of tobacco-pipe, nearly two inches in length, which he had extracted from behind the ear of a boy who, between two and three years previously, had fallen down while holding a long clay pipe between his teeth. When the child was brought to him, there was a swelling over the mastoid process, and a small aperture on it, by which some foreign body was detected, which at first was thought to be dead bone, as no history of the accident with the pipe had been obtained. When, however, the foreign body was extracted, the mother of the child first mentioned it. She stated that after the accident the boy had been seized with a severe illness, accompanied with a great pain in the head. These symptoms, together with an inability to open the mouth, continued for some months, at the end of which they subsided, when the swelling first appeared behind the ear, and continued there for two years; it had been thought to be merely an abscess, and treated accordingly. On examining the interior of the mouth, which could only be opened about half-way, Mr. Smith could see an opening in the mucous membrane, just at the base and

inner side of the ascending ramus of the lower jaw, through which the piece of pipe had penetrated. It must have passed along the inner and posterior border of the jaw, amongst the important vessels and nerves, and gradually made its way towards the surface, where it had remained for two years.

[*London Lancet.*

Use of Cubebs in Infantile Enuresis. By Dr. Deiters.—This author has found cubebs more effectual than any other remedy in curing the incontinence of urine so common among children. This complaint may depend upon atony of the bladder, or on the presence of intestinal worms. In the former case the cubebs acts as a tonic, in the latter as a valuable anthelmintic. The medicine requires to be given in considerable doses; two pinches (*i. e.* a few grains or *Zwei Messerspitzvoll*) for infants, and a half teaspoonful twice or thrice daily for children of a somewhat more advanced age. Its effect is speedy and permanent; and although occasionally it happens that during its administration the incontinence returns at periodical or irregular intervals, these recurrences gradually become less frequent, and eventually disappear altogether. To effect a radical cure, the author has often found it necessary to continue its use for a period of from three to eight weeks, and he has never observed any injurious effects from its administration.

Deiters observes that he has found the same remedy most efficacious in checking nocturnal emissions in case of spermatorrhea.—[*Edinburgh Monthly Journal.*

Removal of a Portion of the Left Lung. By T. B. Hale, M. D.

Editor Medical Examiner:

Dear Doctor—The following case has been communicated to me by my friend, Dr. Hale, of Minersville, Pa. Believing it to be unique, I am desirous of giving it to the profession through the pages of your valuable journal. The removed portion of lung is now in my possession. It is pyriform in shape, somewhat flattened, and measures about 6 inches long, 2½ inches in diameter at the largest end, and 1 inch in diameter where it was cut across. It appears quite destitute of blood, except near the small end, where the capillaries appear quite full. The specimen is somewhat contracted in size from the action of the alcohol in which it is preserved.

Very respectfully, J. H. Wythes, M. D.

Port Carbon, Dec. 21, 1854.

C. D., an Irishman, aged 25 years, rather small in stature, but stoutly built, with a well developed chest, being engaged in a fight while intoxicated, received a stab in the left side, parallel with the ribs. The wound was about 1¼ inch long, and appeared to have been made with a sharp, clean-cutting instrument. About fourteen hours after the injury he was visited by Dr. Hale, who found, upon examination, a portion of the left lung protruding from the thorax. He was sitting up in bed, having the protruded portion supported by a broad bandage. He complained of no pain, and had suffered but little from loss of blood. There was no cough or difficulty of breathing, but on taking a full inspiration the protruded lung became filled with air, and drops of venous blood oozed from its substance. The protrusion was so tightly strangulated at the wound in the thorax that after an hour and a half spent in unsuccessful efforts to restore it, Dr. Hale made a cautious attempt to enlarge the wound in the interosseous space. Fearing,

however, the effect of a large opening into the cavity of the pleura, he was induced to desist, and consider the propriety of excision. As the protrusion looked extremely unhealthy, from the length of time since the accident and the efforts made to reduce it, making gangrene not an improbable result, excision seemed to be the only resource. Dr. H. contemplated applying a ligature at the base of the protruded lung, but on making two experimental incisions into its substance, and no blood flowing, this was not judged necessary, but the mass was at once excised, and the remaining portion pushed back through the wound in the interosseous space, the orifice of which was then closed with two stitches and strips of adhesive plaster. The patient was then directed to lie quietly on his back, and a mixture of two parts syr. prun. virgin., and one part syr. opii. prescribed; a table-spoonful to be given every two hours, for the purpose of allaying irritation in the bronchial tubes. On the second day Dr. Hale found him in a favorable condition, and on the sixth day he walked five miles to visit his physician, suffering in no manner from the loss of the portion of lung. For the last three months he has labored constantly in the coal mines, without inconvenience.

The speedy recovery of the patient appears to have been due to adhesive inflammation between the adjacent walls of the pleura, through the wound in which the protruded lung was strangulated. In all probability the pulmonary and costal pleura and the substance of the lung are all connected in the same cicatrix.

Lumbago.—In M. Bonnet's famous work on the affections of the joints, in treating of diseases of the spine, he mentions incidentally the efficacy of *kneading* in cases of lumbago. Recently Professor Nélaton has had occasion to employ this treatment, and has found its results rapid and successful. A man who had fallen on his back experienced the most acute pain in the common mass of the sacro-lumbalis and longissimus dorsi muscles, and was unable to execute any movements of torsion or flexion of the trunk. He was brought to the *Hôpital des Cliniques.* M. Nélaton covered the lumbar region with cerate, and then with his thumb and fore-finger he *kneaded* the muscular mass for five minutes; he was then relieved by a pupil, and, at the end of twelve minutes, the patient to his astonishment was able to move his trunk in every direction without the slightest pain.

[*Jour. de Méd et de Chir.. Virginia Med. and Sur. Jour.*

Hooping-Cough.—Our readers are aware that Dr. Arnold, of Montreal, attributes great efficacy to nitric acid lemonade, as it is termed, in the treatment of hooping-cough. An English physician, Dr. Gibbs, has recently published a monograph on this disease, in which he claims almost specific virtues for the nitric acid. The mode of preparation is simple. Into water, sweetened until it is almost of syrup consistence, nitric acid is poured until the mixture is about the strength of lemon-juice. A child of a year old should take a dessert-spoonful every hour. To avoid injury to the teeth, a gargle of carbonate of soda should be used after each dose.—[*Virginia Med. and Surg. Journal.*

State Medical Society.—The Sixth Annual Meeting of the Medical Society of the State of Georgia, will be held in the city of Columbus, on Wednesday, the 11th of April next.

D. C. O'Keefe, M. D., Recording Secretary.

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ORIGINAL AND ECLECTIC.

ARTICLE VIII.

Disturbances in the Functions of the Human Body from changes in the condition of the Atmosphere. By W. L. JONES, M. D., of Morgan county, Georgia.

Variations in the atmosphere affect us in two ways—by direct impressions on the nervous system, and by modifications of some of the "physical phenomena of living beings." Of the former, we know little beyond the fact of their existence, as revealed by sensation; the latter, coming within the domain of experimental science, admit of more searching investigation and more definite results, and it is proposed at this time, briefly, to discuss them in connection with the functions of the skin and lungs, portions of the body most directly in relation with the external atmosphere. The changes in the air with which we are best acquainted and which most obviously affect us, are of temperature, moisture and pressure; those of the first two being oftentimes excessive in the same locality—of the last, small, except in comparing places of unequal altitudes above the sea.

One of the immediate effects of heat upon the *skin*, as upon all other portions of the body, is to cause an influx of blood thereto, and concomitant with this, or consequent upon it, to increase the activity of its functions. As relates to our present purpose, its special function is to regulate the escape of moisture—the passing off of a certain amount of water through the skin, either in the form of vapour, as in exhalation, or of perspiration, seeming to be

of great importance in the animal economy, as appears to be indicated by the fatal results attending the coating over the skins of rabbits, with a varnish impermeable to moisture. A hot atmosphere, increasing the quantity of blood in the skin, and obviously, therefore, the amount exposed to the drying action of the air, tends of itself to promote the escape of moisture through the skin, and if, in addition, it be dry, evaporation necessarily proceeds with great rapidity; this reacts again upon the circulation of the skin, for, as its capillaries are so constantly relieved of their contents, new supplies of blood are as constantly invited, so to speak, to refill them; this again increases the amount of evaporation, and in this manner, these actions and reactions take place, until the circulation of the skin acquires its maximum. If, besides being hot and dry, its pressure is diminished as upon the tops of mountains and elevated regions generally, a still greater amount of evaporation will take place, and the greatest possible activity in the circulation of the skin will be induced; for water passes more readily into the form of vapour under decrease of pressure, as instanced by the lower temperature at which it boils upon mountain tops. Heat and dryness, combined with a diminution in the pressure of the air, furnish, therefore, the most favorable conditions for rapid evaporation from the skin, and, consequently, for great activity in its circulation. They will also produce similar effects upon the lungs; a larger amount of watery vapour will escape from its capillaries into the air which is inhaled; this invites a rapid flow of blood towards them, and a more perfect aëration of this fluid results from the greater frequency with which it comes in contact with the air in the lungs.

The capacity of the air for taking up a dose of moisture additional to that it already contains, is dependent upon the difference between its actual temperature and that of its *dew-point*, or that at which it would give up some of the water it already holds, were the temperature reduced any lower; the greater the difference between these two points, the greater its capacity for receiving a new supply. Moreover, it is affected by the *absolute* temperature of the air, being always greater—*cæterus paribus*—when this is high than when low, 10° difference between the two points mentioned above, not allowing, by any means, so large a quantity of water to be taken up when the air is at 40° as when at 80° of temperature. But in its influence upon evaporation from the body, low temperatures are not so powerful as at first might be

supposed; for coming in contact with the skin, the cold air receives a portion of heat from it, and acquires thus an additional capacity for moisture. Even if already saturated with water, having its temperature raised by contact with the body, whilst its dew-point remains the same, it will be in a condition to receive new supplies of moisture. More particularly is this true of the air taken into the lungs, as it must, almost of necessity, acquire the temperature of that organ. If the air is much colder than the body, therefore, evaporation will take place from the skin and lungs, even though it be saturated with moisture.

If the air be *damp* and *hot*, on the contrary, nearly as warm as the body itself, evaporation must proceed *very slowly;* exhalation almost ceases, and the water secreted by the perspiratory glands bathes the skin, unable to assume the form of vapour. How will this affect the circulation of the skin? Compared with a dry, hot atmosphere, it will undoubtedly retard it, all the fluid brought by the arteries having to traverse the capillaries and find its way back to the heart; and in like manner will the circulation of the lungs be affected. If, now, we conceive the greatest atmospheric pressure, such as exists at the level of the sea, superadded, the escape of moisture in the form of vapour will be reduced to its minimum, and the consequent retardation of the circulation, in these organs, will reach its maximum.

Let us, in the next place, inquire, what effects these changes in the circulation of the skin and lungs, dependent on the variations in the atmosphere, may have upon the general functions of the body. The escape of a considerable amount of moisture through these organs—the average, according to the experiments of Lavoisier and Seguin, being about 3½ pounds daily, appears to be a normal condition of things, and highly favorable to health. It invites a free supply of blood to the skin, prevents the undue accumulation of it in the viscera and internal portions of the body—in other words, equalizes the circulation; it causes the blood to flow freely through the lungs, bringing it in more complete contact with the air, whence it may derive the life-giving oxygen with which to stimulate and invigorate the whole system. How numerous the diseases the physician attempts to relieve by exciting the activity of the skin?—how frequently are sinapisms, and blistering plasters, and frictions prescribed to effect this object? A similar effect is produced, obviously, by a dry atmosphere, not so intense perhaps in its action, at any one moment, as the agents

mentioned above, but uniform and continuous through any length of time one may desire. It would seem, therefore, that in cases of chronic diseases of the internal organs, a dry climate would be very beneficial, by exciting the circulation of the skin, and thus abstracting a larger portion of blood from those organs, for periods of time so extended as to allow them to recover their tone. Again, it is not uncommon to hear persons, suffering with diseased lungs, particularly with partially solidified or obliterated lungs, speak of the invigorating effects of a dry spell of weather upon them. The explanation of this is obvious, from what has been said; increased activity in the circulation of the skin would relieve the lungs of hyperæmia, just as any other viscus; but, in addition, we have seen that a dry atmosphere increases also the activity of the true pulmonic circulation; this causes a more perfect aëration of the blood, and removes, therefore, the irritation which an undue supply of venous blood always produces; and in cases of obliteration or solidification, makes up for the deficiency in the quantity of air cells, where the blood is exposed to the air.

A damp atmosphere on the other hand produces effects quite the contrary of those described; in comparison with a dry one, it drives the blood away from the skin, and it retards the circulation in the lungs, the former causing a determination of blood to the viscera and the latter impairing its aëration, the two conditions pre-eminently favorable to congestion. The brain and nervous system become depressed through the action of the imperfectly oxygenated blood, the left ventricle not receiving the stimulus it is accustomed to from arterial blood, acts with diminished energy, the capillaries become clogged, and a general stagnation ensues at the same time that an unusual quantity of the circulatory fluid driven from the skin is thrown upon the internal organs, and this is nothing more than what is termed by medical writers "congestion" of those organs. Now, where are those diseases to be found where these phenomena occur? Upon the elevated table lands and mountains where the atmosphere is dry? Almost never, but in the neighborhood of the seas and rivers and ponds, either in the tropics or during the summer in higher latitudes, where the air is damp and hot. May not also the derangements of the alimentary canal, so common in these regions, result from an over-activity of the mucous membranes consequent upon a want of action in the skin, the two being vicarious in their functions to so great an extent?

There is another circumstance connected with the escape of

moisture from the skin, which is of high importance. The water which escapes thence passes off in the form of vapour, rendering a large quantity of heat latent, and cooling constantly, therefore, the surface of the body; the more rapid the evaporation the greater is the reduction of temperature. Every one is aware of the cooling effects of a breeze during a hot sultry day, even though the thermometer indicates no change in the temperature of the air; and this undoubtedly results from the increased facility it affords for evaporation. Now, when the temperature of the air is as high or nearly as high as that of the body (as occurs in the heat of summer), little or no *animal* heat is required to maintain the body at its normal temperature. And if the air be dry, so that evaporation can proceed rapidly, any superfluity of it which may be generated in the body is readily carried off by this process, and no inconvenience results. If, on the contrary, the atmosphere is damp, so that the escape of moisture is retarded, an excess of animal heat cannot be disposed of in this manner, and must therefore elevate the temperature of the body above its natural standard. As this is seldom found to be the case, however, it is more probable that under such circumstances, the hydrocarbons of the food which are ordinarily appropriated to the production of heat, escape combustion, and are thrown in unusual quantity upon the excretory organs for elimination. May not some of the derangements of the liver in hot damp climates be connected with this circumstance?

To recapitulate, briefly: A dry atmosphere, by permitting a rapid escape of moisture from the skin and lungs, increases the activity of the circulation in those parts, preventing an undue determination of blood to other portions of the body; and at the same time rendering its aëration more perfect: the evaporation of this moisture also cools the body in hot weather, disposing of any excess of animal heat which may be generated. A damp atmosphere, on the contrary, throws the blood upon the internal portions of the body, retards its oxygenation in the lungs, and, by preventing the escape of heat, though evaporation from the skin raises the temperature of the body whenever an excess of animal heat is generated, or forces the excretory organs to eliminate those portions of the food which are ordinarily used up for the generation of heat.

A Reply to Dr. Boling's Experiments with Phosphorus, and his remarks upon its dose and action when given in the form of Alcoholic solution or tincture. By S. AMES, M. D., of Montgomery, Alabama. (Abridged, by the author, from the Nov. No. of the New Orleans Medical and Surgical Journal, 1854.)

An account of these experiments was published in the May No. of the New Orleans Med. and Surg. Journal for 1854, and in the Southern Med. and Surg. Journal for July last. They were instituted, it seems, while Dr. Boling was in search of a 'cardiac sedative,' equally prompt, powerful and reliable as the veratrum viride, but without the objections which, in his opinion, pertain to that remedy. After trying, by experiments on healthy persons, whether the yellow jessamine would not furnish the kind of sedative required, and being disappointed, he was induced, by my paper on the Treatment of Pneumonia, published in the January number of the same journal, to make similar experiments, also, on well persons, in order to test the sedative properties of phosphorus in an alcoholic solution, the remedial operation of which is there ascribed to a sedative action. The experiments thus prompted, led Dr. Boling to three principal conclusions, namely:

First—That Phosphorus is not a Sedative;

Secondly—That it is not a Stimulant; and,

Thirdly—That it is not poisonous when given in an Alcoholic Solution or Tincture.

These conclusions, it seems, were derived exclusively from these experiments. Dr. Boling expressly disclaims having had any experience of the properties of phosphorus in acute diseases. "I have never," he says, "in any instance, given it in a case of acute or dangerous disease."

It is important to keep in view the conclusions in the order here set down, an arrangement not adopted in the paper under review, as, for the sake of perspicuity, it is required to examine the experiments and the remarks on them, in reference to each conclusion, separately.

The first question before us, then, is, as to the proof afforded by these experiments, that *phosphorus is not a sedative.*

Dr. Boling selected two subjects for his trials with this medicine: one a mulatto child, seven years old; the other an adult black, under treatment by means of the bandage and a recumbent posture, for an ulcer of the leg, but otherwise in good health. Besides

these, Dr. Boling submitted himself to some experiments; but as they are noticed by him only in a general way, and more in reference to its poisonous than sedative, their consideration is deferred for the present.

In all experimental trials of this kind, it is to be remembered that the state of the pulse is the thing to be observed, and is alone to be looked to for any indication of the effect of the medicine given, and consequently that all collateral inducements to changes in the action of the heart should be carefully avoided. Such being the case, it is not without some surprise that one observes, in the record of these experiments, an absence of any especial care to avoid those normal causes affecting the state of the pulse, which, being common to all persons, of whatever age, are almost constantly in operation during our waking hours. Indeed, their possible influence seems to have been overlooked, except in the single instance of the recumbent posture which is mentioned apparently in view of its effect on the pulse, though the difference between that posture and an erect one, or active muscular exercise, in connexion with such effects, is not alluded to. So, too, the presence of other causes, as fasting and repletion, sleeping and waking, are mentioned, but not in this connexion. Yet these are known to be active sources of perturbation in the heart's action, which, if not voidable, ought, it would seem, to have been carefully noted, and as far as possible taken into the estimate in counting up the results.

But the influence of these common physiological causes, though requiring to be noticed as one of the elements of fallacy, is of much less moment in this discussion than they would otherwise be, on account of the obvious presence of another cause, operating more powerfully to disturb the pulse, and, consequently, affecting more decidedly the results of the experiments. The evidence of the presence of such a cause, and of its controlling influence in both subjects, not only over the pulse, but over the action of the ordinary physiological causes, is found in the record of the experiments; and to the details necessary to point this out, I wish for a brief space to call especial attention.

The two first experiments on the little boy, "Sam," are very significant of the singular fact just referred to:

"On the 25th of February, having kept him (Sam) in a recumbent position some time, his pulse being at 102, at one o'clock P. M., I gave him seven drops of the saturated tincture (of phos-

phorus); at two o'clock P. M., pulse variable, from 90 to 108 (eighteen beats while counting it); three P. M., (subject asleep,) pulse 94; the dose of seven drops repeated; four P. M., (subject asleep,) pulse 104.

"February 26th. Ten o'clock P. M., pulse 100; one and a-half o'clock, pulse 114; two o'clock, pulse 100"—(a rise and fall of fourteen beats at intervals of half an hour.) "No phosphorus given to day.

"The experiments already given were conducted with the subject in a recumbent posture. In the following, he was generally called in from play, when a dose was given or the pulse to be counted."

In these two experiments the subject appears to have been, more than in any of the subsequent ones, freed from those ordinary incidents which operate to derange the action of the heart in health. For example: He was lying down all the time, so that no influence could have been exerted by changes of posture, or of more active muscular exertion. Again, in the first experiment he was asleep at two consecutive countings—the pulse still exhibiting the same tendency to change as when awake; it being found at the last counting ten beats quicker than when counted while asleep, one hour before. Thus, while the tendency of sleep is to reduce the frequency of the pulse, and give it uniformity, it is found to be not only faster in this subject, when asleep, at one time, than another, but faster, by eight beats, when asleep at four o'clock, than when awake at one o'clock. The cause of these changes was therefore sufficient to overcome the usual sedative influence of sleep—a very powerful one, too. We are not told whether "Sam" took any food shortly before or after one o'clock, on either day, nor is it material here to know; for, if so, its effect could have been only to give a uniform acceleration to the pulse while the process of digestion was going on; not, certainly, to produce this kind of vacillation. There is still another appreciable physiological cause, whose operation would be more likely than any other to bring about this kind of changes, and that is mental agitation; but we have no direct evidence of its presence. If present, it would probably have shown its presence by other signs, which could hardly have failed to attract the attention of Dr. Boling, who does not, however, allude to it. Nor could the medicine given have had any influence to derange the pulse in this way; for seeing that the changes in these and other experi-

ments, occurred equally when the phosphorus was or was not given, and equally, when given in comparatively small or large doses. Dr. Boling, himself, very properly excludes it from any agency in producing them.

Here, then, we find in two experiments—one of them occupying three hours, and the other one hour only—an extreme variation in the pulse, of eighteen beats in the minute in the one, and of fourteen in the other; while in both the pulse rose and fell so suddenly as not to be really the same at any two consecutive countings; and this, when all the ordinary incidents affecting the rythm of the heart's action, were either absent or obviously inoperative to produce such effects. Excluding, therefore, all these ordinary incidents, what other conclusion is left, the subject being in good health, than that there was in him some inappreciable peculiarity or idiosyncracy of considerable force, operating to produce these striking anomalies in the heart's action.

In the subsequent experiments on "Sam," the circumstances were less favorable for the manifestation of this peculiarity; one of the ordinary physiological influences, namely, muscular exertion; and one extraordinary one, not physiological, namely, large doses of alcohol, were present in these and absent in the others. The influence of the alcohol may be estimated with some assurance of accuracy, for, being the vehicle for the doses of phosphorus, the time of giving it, and the quantity, are noted; but we have no means of estimating the probable effect on the pulse, of the additional physiological cause for its changeableness. We are not told, for instance, in which of the experiments he was called in from play to take the experimental dose, or to have his pulse counted; nor whether, when called in from play or at other times; the pulse was counted while standing, or in some other position. All the information we get on these important points, so sure ordinarily to derange the pulse, is that he was *generally* called in from play. So, too, in the experiments which were partly conducted while the subject was riding in the buggy with his master, no especial reference is made to the circumstances in which the state of the pulse was noted. Nor have we any information in this, any more than in the other experiments, at which time "Sam" took his meals, nor in which he did or did not take food, though we are assured that both subjects took their meals as usual, and with their usual appetite and relish, and, of course, in the usual quantity and variety; but, as we do not know the hours of break-

fast, dinner, or supper, we cannot apply this general assurance to the particular experiments. These incidents, I hardly need say, are of a kind to have had a decided influence over the pulse; but whether they did so in this instance, or when, and to what extent, are things that we are not permitted to bring into the estimate for want of these essential details. Nevertheless, an analysis of the experiments as we find them recorded, brings into view, in despite of all counteracting causes, the manifestation of the same controlling powers that is so plainly exhibited in the former experiments.

The first evidence of this that I shall notice is, that the pulse took a *lower* range, and was not more variable in these subsequent experiments, when the pulse should have been accelerated by an erect posture, or the mere active muscular exertion of boyish play, than in the too first, when the subject was lying down all the time, and asleep a part of the time. Thus, the average of the two first experiments is respectively, leaving out the fractions, ninety-nine and one hundred and four beats to the minute; while the highest average in the subsequent ones, excluding the effect of overpowering doses of alcohol, was one hundred, and the lowest ninety; while the general average in the former subject being at rest, is one hundred and two. The general average in the latter, when he was engaged in active exercise, actually falls to ninety-six. Why did changes of posture, and the alternations of rest and muscular exercise, fail to have their usual influence in quickening the pulse? The pulse ought to have been very much accelerated, but we find it slow. How could this happen unless there had been some other cause at work more powerful than they, in its influence over the action of the heart.

Secondly: The suddenness and extent of the changes in the pulse. Thus: March 10th, the pulse at 12 M. was one hundred; at 1 P. M., it varied from one hundred, to one hundred and six. This means, probably, that the variation occurred while the pulse was being counted at that time. At 2 P. M., pulse one hundred and four; 3 P. M., pulse one hundred and eight; 4½ P. M., pulse ninety-two; 6 P. M., pulse eighty-eight,—a fall of twenty beats in the minute in three hours; and *five minutes* later ninety-six.

Thirdly: Similar changes occurred while the subject was under the influence of large doses of a powerful stimulant. Thus: March 12th, at 5, and at 5½ o'clock P. M., "Sam" took, at each time, two hundred drops of anhydrous alcohol, the vehicle for the doses of phosphorus then given, that is about four drachms of anhy-

drous alcohol in the course of half an hour. The result as regards the pulse is thus noted: 5 P. M., pulse one hundred—two hundred drops given; 5½ P. M., pulse one hundred—two hundred drops given; 6¼ P. M., pulse one hundred and seven; 7½ P. M., pulse ninety-four.

That is to say, the pulse rose seven and *fell* thirteen beats in the minute within two hours after taking the last dose of alcohol; and of course, while the subject was still under its influence. Now, it would seem hardly possible that the pulse could have fallen so much, for it is to be noticed that two hours and a quarter after the last dose, it was six beats slower in the minute than just before the doses of alcohol were taken; or at all, while acted upon by a quantity of this prompt and powerful stimulant, which is equivalent to about an ounce of good brandy, given to a child seven years old; unless there had been some unusual cause of perturbation in the action of the heart.

Another significant fact, leading to the same conclusion, is exhibited in the succeeding experiments. Thus: March 18th, 8 A. M., pulse ninety-two, five hundred drops (more than half an ounce of anhydrous alcohol, the menstruum for the dose of one-tenth of a grain of phosphorus) was given. One hour afterwards, namely, at 9½ A. M., the pulse was still at ninety-two; ten beats *below* the average in the other experiments, in which the subject took neither an artificial stimulant or muscular exercise.

These experiments, if they give us no clue to the nature of the cause of these singular interruptions to the normal rythm of the heart's action, afford more decisive evidence of its power. We have seen that the vacillations in the pulse occurred under all circumstances, with two exceptions, in both of which a large dose of an active stimulant was operating to control it. The pulse rose and fell almost equally while under the influence of about half an ounce of alcohol, as when none was given; while a larger dose, more than half an ounce, served only to make the pulse regular, and apparently to reduce its frequency, for it is found below ninety-two in but three countings in all the other experiments on this subject. It required a larger dose still to overcome this physiological tendency, to change so far as to exhibit the usual effect of a stimulant on the pulse. Thus: March 17th, 4 P. M., pulse 104, nine hundred and ten (910) drops, "being," says Dr. Boling, "exactly one ounce (of anhydrous alcohol, being the menstruum for the dose of phosphorus) given at a dose. And here

is the result: half after 4 P. M., pulse 116; 5 P. M., pulse 120; 7 P. M., pulse 104, and the subject feels very well." The dose of alcohol, it is seen, is a very large one, if we take into consideration the tender age of this subject. Good brandy contains less than fifty-three per cent. of alcohol; the dose, therefore, was nearly the equivalent of two ounces of brandy. The age of the subject being seven years, the dose for him should be about one-third of that for a man of middle age; so that the quantity of alcohol taken by Sam, at one dose, was equivalent to nearly six ounces of good brandy for a man of middle age. Yet the pulse was quickened only for the space of something over two hours; at the third hour it was found to be the same as at the time the dose was given. The pulse fell *sixteen* beats in the minutes between the second and third hour. Was this owing to any narcotic effect from the alcohol? It seems not. "The two hours immediately succeeding the two last doses," Dr. Boling tells us, "Sam spent riding in my buggy, and attending to my horse, at the different stopping places, and at the end of the experiment, the subject feels very well."

What estimate, then, shall we make of the power of that cause perturbing the heart's action, in this subject, when half an ounce (four hundred drops,) of anhydrous alcohol failed to affect it at all, and five drachms (five hundred drops,) seemed only to steady it, and, apparently rather to reduce than to augment its frequency, and a full ounce, equivalent to nearly two ounces of brandy for the child, or six ounces for an adult, quickened it but for a short time, something over two hours? May we not at least conclude that a cause, so resisting to such active stimulating influences, may have been sufficient to prevent any manifestation of a sedative power not absolutely poisonous?

Abundant evidence of the same peculiarity is exhibited in the adult subject, in whom this vacillating tendency in the action of the heart, was not less striking than in the other, if due allowance be made for the difference in age. For example:

"March 4th. Eleven o'clock A. M., pulse 80; half-past twelve P. M., pulse 72; three P. M., pulse 68. No phosphorus given to-day."

March 7th. Twelve M., pulse 78; half-past twelve, pulse 68; eighty drops (of the saturated tincture of phosphorus) given; two and a half P. M., pulse 76.

March 10th. Half-past seven A. M., pulse 76; half-past eight A. M., pulse 70; ten A. M., pulse 80; eleven A. M., pulse 80;

twelve M., pulse 82; half-past one P. M., pulse 76; two P. M., pulse 68; three P. M., pulse 74; half-past four P. M., pulse 80; six P. M., pulse 82. No phosphorus administered to-day.

March 11th. No phosphorus was given, but the pulse, being counted at intervals, was found to vary about as it did yesterday.

The extreme range of the pulse is here seen to reach ten, twelve and fourteen beats to the minute, suddenly, and without any apparent cause. The same thing is true, generally, of the other experiments on this subject; the pulse in this, as in the other subject, being very seldom the same at any two consecutive countings, no matter how short the time between them. Thus, the changes occurred equally when the phosphorus was or was not given; the man was all the time recumbent, so that neither posture nor exercise could effect his pulse. There seems to be no reason to believe that mental agitation operated in this, any more than in the other subject; and, finally, the pulse did not, in a single instance, exhibit the regular diurnal ebb of the heart's action from morning to night. The taking of food, by this subject, is particularly spoken of, in connection with one experiment only, and in this it is worthy of notice, that the pulse was more steady on this than on any other day, though we find the usual order of the diurnal change reversed, the pulse increasing in frequency, instead of diminishing, as the day advanced—thus:

March 15th. Nine o'clock A. M., pulse 72; 200 drops of the saturated tincture (of phosphorus, holding in solution about one-fourth of a grain) given; ten A. M., pulse 72; eleven A. M., pulse 74; one P. M., pulse 76. A short time before he took the 200 drops, he ate a hearty breakfast, and at two P. M., with decided relish, a substantial dinner of bacon, cabbage, potatoes and corn bread; four P. M., pulse 80.

The unusual regularity of the pulse in this instance may have been accidental; nevertheless, it is singular as a coincidence, that this is the only day in which it exhibited a similar regularity in its variableness; the effects of digestion seeming, like the stimulus of the alcohol in the other subject, rather to steady the pulse than to increase its frequency, which is known to be its usual tendency.

Excluding, therefore, in both subjects, all known and appreciable causes from any agency in producing these remarkable and peculiar physiological changes in the action of the heart, or making all proper allowance for their effects, we find remaining a degree and kind of eccentric action, whose cause it is evident must have

had a predominant influence over the result of these experiments. In such a condition of the heart's action, so perseveringly and actively variable, arising from a cause capable of resisting not only the usual physiological stimuli, when known to be present, but also the power of a very active medicinal agent, administered in large doses, may we not suppose, that even a pretty active sedative influence would be as powerless over the pulse of these subjects as the stimulants proved to be? In truth, this source of fallacy seems to be of that precise kind which would necessarily preclude any other than the negative results actually obtained by Dr. Boling in these experiments.

I turn, now, from the fallacies in the experiments to the more important fallacy in this conclusion from them. The latter is not dependent on the former, but inheres in the conclusion itself, and would be the same if there had been no sources of fallacy in the experiments. The conclusion, which is a general one, as to the sedative action of phosphorus, is so stated as to cover two distinct propositions which have no necessary connection: *First*, that phosphorus does not act as a sedative on persons in health; and, *secondly*, that it does not act as a sedative in disease. Dr. Boling *infers*, from the result of his experiments on well persons, that the same result must accrue from similar experiments on sick persons,—an inference strictly *à priori*, which Dr. Boling has not tested the truth of in a single instance of acute or dangerous disease. The fallacy lies in this inference from the negation of physiological effects to the negation of therapeutic ones.

Instances illustrating the fallacy of *à priori* arguments of this kind are equally numerous and familiar. I select, for illustration here, two such instances.

Lemon juice, it has recently been discovered, exercises a speedy and very efficient curative agency in acute rheumatism,—an inflammatory affection, in which contra-stimulants or sedatives are necessarily the only effective remedies. Now, is there anything in the physiological effects of lemon juice which would indicate this therapeutic action? I believe not. Certainly it has no considerable power in this respect, if any at all; and yet it is said to reduce the force and frequency of the pulse, in this disease, with a degree of power not equalled by the most active sedatives known to the Materia Medica. Let us suppose, then, that when this discovery was first announced,—physicians, instead of testing its

value in the circumstances of disease in which its sedative power was affirmed, had set about to determine whether this was true or not, by giving it to well persons, to try, in fact, whether it would cure rheumatism by giving it to persons who had no rheumatism to cure,—what the *à priori* inference from such experiments would be, as well as its value when made, is obvious enough. Would they not, in fact, have necessarily come to the same general conclusion in regard to the sedative power of lemon juice, that Dr. Boling was led to by his experiments in regard to phosphorus?

Again: It is well known to medical men practising in the Southern and Southwestern States, that quinine acts more efficiently as a sedative in a certain class of diseases than any other medicine. The pulse may be (every one must have seen it) reduced by a single dose, but always by a few doses, if the circumstances be suitable, twenty, forty, or even fifty beats in the minute in a very short time. And yet if the same medicine be given to a person in health in the same doses, or even larger ones, it may be that the pulse will not be effected at all, and is just as likely to be made faster as slower. An example in point, remarkable on account of the unusual size of the doses, has been recently related to me by Dr. Reeves, of this city, who gave to a man with chronic hypertrophy of the spleen, but without fever, the enormous quantity of an ounce of quinine in the course of four days, in doses of forty grains, given three times daily. Dr. Reeves did not observe any material change in the man's pulse during the whole experiment, for such it was. What change there was, indicated an increase rather than a diminution of its frequency. Numberless other instances of its inaction on the pulse of well persons, as also in some forms of febrile disease, will occur to the memory of every physician who has made much use of it. My own experience with it as regards its action, when I have taken it, or given it to others, is to the effect that quinine, like lemon juice, does not so effect the pulse in health as to give any intimation of its extraordinary sedative power in some forms of disease. Such, no doubt, is also the result of the experience of physicians generally, if not universally. But if so, how false a guide to the truth would be experiments made with quinine like those made by Dr. Boling with phosphorus?

But, not to fatigue the reader with further illustrations of an obvious truth, we here close the review of these experiments, so far as they relate to the sedative action of phosphorus, by summing

up the conclusions from all that has been said, which, I think, are embraced in the following propositions:

First: That the fallacies in the experiments were of such a kind as to preclude any other than the negative results actually obtained from them, and consequently, that they afford no reliable proof as to the sedative power of phosphorus in health; and,

Secondly: That if the experiments had been so conducted as to insure accurate results, they would furnish us reliable evidence as to its effects in disease.

[To be concluded in the May No.]

ARTICLE XI.

Decoction of Mullein leaves (Verbascum Thapsus) as an Antiperiodic. By E. W. McCrary, M. D., of Clinton Depot, S. C. (Communicated in a letter to the Editors.)

I have found from experience that a decoction of Mullein leaves is equal in its effects to sulph. quinine. My method of preparing it is as follows:

℞. Mullein leaves, ... ℥ij.
Boiling water, ... oij.

Boil until reduced to one pint. Of this I prescribe four dessert-spoonsful every two hours, commencing early in the morning. This is to be repeated on each day that the paroxysm is expected, for three or four days, when a permanent cure will be effected.

Three Lectures on the Spinal System and its Diseases. Delivered at the Chatham-street School of Medicine, Manchester. By Marshall Hall, M.D., F.R.S. L. & E., Foreign Associate of the Imperial Academy of Medicine of Paris, etc.

LECTURE III.

THE MODES OF DEATH AND THE THERAPEUTICS IN DISEASES OF THE SPINAL SYSTEM.

Gentlemen,—In my lecture of yesterday, I explained to you *two* modes in which spinal seizures may issue in death: the first, by apoplexy of the medulla oblongata and paralysis of the pneumogastric nerve; the second, by shock on the heart; the former, somewhat slowly—the latter, suddenly.

There is another mode of death in epilepsy. It is the result of sheer nervous exhaustion, from the rapid or constant repetition of severe paroxysms.

This subject will be best illustrated by an experiment:

I divided the cerebral from the spinal centre in this frog, and then dropped on its surface a few drops of a solution of the acetate of strychnine. It has become affected by the poison: the least touch, the least jar of the table thows it into a tetanoid paroxysm.

If I avoid excitement, the animal survives in its state of strychnism for a long time. But if I continue to repeat the excitation, the excitability and life soon become extinct.

I will suppose the frog without injury, but placed under the influence of strychnia; if it be secured from all excitation, it recovers; if it be exposed to repeated excitation, it dies.

So it is in the dog.

Even in tetanus in the human subject, I believe some patients would recover if preserved absolutely from excitation, who die under its exhausting influence.

The same event occurs in epilepsy. In a case detailed in the Lancet, by Dr. Bucknill, in which tracheotomy had been performed, and in which, therefore, laryngismus had lost all its baneful influence, the patient died of pure exhaustion, "distinctly not of coma."

Death from nervous exhaustion must therefore be added to the other forms and modes of death in epilepsy.

There is still another source of danger and of death in epilepsy. It arises out of trachelismus assuming the form of torticollis, and attended with twisting of the body.

Some time ago a medical student, affected with epilepsy, called on me, and, whilst we engaged in conversation, uttered a fearful cry, became affected with twisting of the neck and body, and would have fallen had I not held him forcibly on his chair.

The next morning he was found dead in bed, with his face buried in his pillow!

He had doubtless had a fit in the night, which, assuming the form I had observed and have described, turned him in bed.

In this manner a patient has been suffocated in a fit of epilepsy, the face being found literally buried in the soft soil of a newly-ploughed field, or submerged in shallow water.

Such, then, are the principal modes of death in epilepsy. Another topic which I must discuss briefly before I enter on the subject of the therapeutics of the spinal system, is, the mode and degree of recovery from attacks of epileptic or convulsive affection.

An epileptic fit probably ceases frequently from nervous exhaustion of the spinal centre, just as we observe the tetanoid spasm cease in the frog affected with strychnia.

From this exhaustion reaction usually takes place, and the spinal centre passes into a state of undue excitability, just as reaction follows repeated attacks of syncope in cases of loss of blood, passing into excess.

In this condition of excessive excitability, the slighter causes of

the epileptic seizure are usually but too operative. It constitutes indeed the continued *predisposing* cause of epilepsy.

This undue excitability of the spinal centre is by no means incompatible with a shattered condition of the general system; and therefore we frequently observe the epileptic patient pale, thin, and feeble, though in other cases there are a florid complexion, a robust form, and much muscular power.

Besides the spinal centre, the cerebral centre is apt to be affected in severe epilepsy, and the patient is left comatose, maniacal, or with loss of memory or intellect. These events appear sometimes to depend entirely on intra-vascular congestion, and sometimes on effusion, ecchymosis, softening, or other lesion.

You will not, gentlemen, be surprised, that from *any* mode of treatment we look for success, not in cases with organic lesion, or of inveterate standing, but in the comparatively recent cases of excentric inorganic origin, and still without organic change.

Now let us consider what may be accomplished in the treatment of epilepsy or other convulsive disease.

Once more I beg your attention to my Table. Look at this list of *causes*. The first part of our treatment depends on carefully avoiding all these.

The excitements, the irritations must be, as far as possible, avoided. The morbid conditions of the blood must be remedied. A low posture and deep sleep must be carefully shunned. The neck must be cautiously guarded against a tight collar.

One event we must constantly suspect: an undue acidity in the stomach. Against this, the bicarbonate of potass is the present remedy, and should be taken on every recurrence of a threatening symptom. Many patients have carried about with them a solution of twenty-five grains of this bicarbonate in two ounces of water, and taken it in such circumstances with the greatest advantage.

Another event to be suspected is the formation and retention of scybala in the colon. These are only effectually removed by an enema of three pints warm water, slowly administered. But in this manner, too, the threatened attack has been averted.

One patient succeeded in replacing an attack by a fit of vomiting, taking for that purpose, on any threatening, half a drachm of ipecacuanha. To this I have sometimes *added* an equal quantity of the bicarbonate of potass.

The bowels should be kept well relieved daily; but I have known a dose of purgative medicine constantly to produce a seizure.

One patient took many remedies empirically. None did good. But the turpentine acted injuriously.

Of all our remedies, none is more important than a well-regulated, simple, digestible, nutritious diet.

Against the undue excitability of the spinal centre in epilepsy, well-appointed walking exercise is the specific remedy. But *effort* or *fatigue* adds to the evil.

I think there is as the cause of sleep a latent trachelismus. The usual posture during sleep is the recumbent. Both these must conduce to the epileptic seizure. I have constantly recommended a posture during sleep at an angle of fifty degrees. And I think that I have seen advantage from gentle movements and noises in the patient's room during the first sleep, to prevent deep sleep.

All empirical remedies may be safely discarded. It is very improbable that *any* individual agent should be able to accomplish all that is required in a case of epilepsy. We may well ask, now that this malady is somewhat understood, why epilepsy should be treated empirically more than apoplexy, or than infantile or puerperal convulsion?

It has appeared to me that the hyoscyamus may allay the nervous excitability so frequently observed in epilepsy. As a little spirit obviously does good in the undue cerebral excitement of delirium tremens, I have thought that minute doses of strychnia may be useful in the undue spinal excitability in epilepsy. For the organic changes induced by epilepsy, mercury is the remedy.

You will observe, in the Table, that after enumerating the remedies which I have briefly noticed, I have asked, is there any *specific* remedy in epilepsy? I am compelled to answer, No! And I must add, that the sooner the profession cease from this derogatory mode of prescription the better, and the more honourable. Zinc, copper, silver, valerian, the cotyledon, the sumbul, are all given in vain.

We must discard empiricism, and treat epilepsy as we do other diseases, on rational principles, tracing causes, effects, and, in a word, every link of the formidable chain, and act on science and common sense.

I must now, gentlemen, retrace my steps, and take up one of the topics which I have noticed briefly, and treat it at greater length. This topic is—*laryngismus*, and its remedy, and the remedy against its effects—*tracheotomy*.

I have already noticed the two kinds of laryngismus which occur in the first and last stages of a severe epileptic seizure, respectively—the *first* being *spasmodic;* the *second*, *paralytic*.

The former frequently closes the larynx perfectly, and a *breath-struggle* is superadded, or there is simple suspension of respiration; the neck, face, eyes, become turgid and purple, the intra-cranial tissues being equally congested.

In proportion, in some degree, to this congestion is the damage inflicted on the cerebral faculties, coma, mania, dementia, being the melancholy effects—the lunatic asylum or the workhouse the melancholy doom.

All these are averted by timely and efficient tracheotomy.

I would strongly urge you to seize some opportunity, during the period of your studies—for I am addressing myself to the younger part of my audience—to witness and write down accu-

rately, the phenomena of the epileptic seizure. It is *not* in any or every kind of epilepsy that I recommend tracheotomy, but solely and exclusively in the *epilepsia laryngea.* It is *not* for epilepsy, but for *laryngismus*, that tracheotomy is proposed.

It is necessary to state this emphatically, for a feeble and malevolent critic has either misunderstood or misrepresented this matter.

We must begin, in the administration of this, as in that of all cases of important remedies, by a most careful and accurate *Diagnosis:*

1. The efficacy of the remedy is precisely proportionate to the degree of laryngismus and its effects;

2. The hope from the remedy is proportionate to the earliness of the period at which it is performed;

3. By the institution of this remedy, the *laryngeal* and most fearful form of the disease is *changed* into some milder or *abortive* form; or,

4. The seizures may cease, or decline and cease, altogether. The former was the happy result in the most interesting case of Mr. Cane.

There are many cases of epilepsy in which tracheotomy would be inappropriate. It would be inappropriate in cases involving *organic lesion*, original or induced, and in cases already become *inveterate.* It would be wrong to institute this operation in cases beyond *hope* of benefit; in the cases already deemed *incurable;* and therefore in most of the cases consigned to the lunatic asylum or the workhouse. In these, all that we ought to expect from this, or any remedy, is some *mitigation* of so dire a calamity.

In the cases in which tracheotomy has been performed, this preliminary *diagnosis* has not always been instituted. The result has been precisely what ought to have been anticipated; yet it has been such, when duly weighed and considered, as to confirm and raise all my hopes from this important and heroic remedy in this Herculean malady. In some the fits have been mitigated a hundredfold; in several a failing intellect has been greatly *restored*, the occupation of the patient, necessarily relinquished, being resumed!

I proceed to notice the second or *paralytic* laryngismus. This is the result of a severe attack of epilepsy—always, I think, the epilepsia laryngea. The trachelismus, the laryngismus especially, the breath-struggles, have congested the cerebrum, and left a deep coma; with this, stertor or paralytic laryngismus has been combined—an event which *reacts* on the cerebral centre, augmenting the coma and the stertor. The patient is frequently seen to be in hourly jeopardy of his life from asphyxia. The countenance is livid, the veins of the neck distended, the integuments tumid. The respiration becomes more and more impaired and stertorous. A diffused bronchial rattle establishes itself.

The form of the asphyxia is, as I have already stated, twofold,

laryngeal and bronchial; at first laryngeal, afterwards both laryngeal and bronchial.

If tracheotomy be now efficiently instituted, the laryngismus is disarmed of its danger. The lividity of the countenance, the distention of the veins, the tumefaction of the integuments disappear *à vue d'œil*. The respiration is free; the danger from *laryngeal* asphxia averted!

I need scarcely repeat, that if this tracheotomy be not only efficiently but timeously performed, the patient's life is saved. But if the operation be delayed, it will be performed too late: if the bronchia have become clogged and choked with mucus, it will assuredly be performed in vain. The patient, however, rescued from *laryngeal*, will succumb to *bronchial* asphyxia.

These observations do not relate to epileptic coma or apoplexy alone, but to *simple* apoplexy in all its forms; that so well described by Abercrombie, the apoplexy of deep intoxication, of narcotic poisons, &c. It is the present remedy, and, if timely instituted, the effectual remedy, for the laryngeal asphyxia in all these cases!

Gentlemen, do not these views excite a deep interest in you? Examine them; judge them *for yourselves;* and be not misled by the ill-natured criticism of any superficial observer or thinker, who leaves *diagnosis* and every other just consideration neglected, and wonders that a fistula, left by a cut-throat, is not a remedy for—laryngismus, and its effects? No! but—for epilepsy!

Having thus stated in *what* circumstances tracheotomy may be available in epilepsy, I will now beg your attention to that which I finally regard as the simplest, the safest, *mode* of performing of it.

I present you with a pair of scissors, so ground at the point as to leave a notch. I propose that, having selected the point of the trachea at which the orifice should be made, you take up a fold of integument over it, and, by means of the scissors, make a vertical incision; that the scissors be now turned one-fourth round; that their points, brought together, be made to pierce the trachea, and then be separated, so as to *stretch* the tissues, and make an orifice of the proper extent.

The points of a little wire *cage*, such as I now show you, made of the proper size and strength, are then to be brought together, pressed into the orifice, and allowed to expand to the proper extent, in their turn; this being limited by a thread properly attached to it, and placed round it.

Not a minute of time, or a drop of blood has been lost, no danger has been incurred, and yet—the operation is performed!

The cage admits of being compressed, and easily removed, washed, and restored. No veil of viscid mucus will obstruct its aperture in any part, and the danger arising from such obstruction, hidden from observation, but detected by Dr. Edwards, will be effectually averted—a danger which I believe to have existed in many cases in which the ordinary *tube* has been long worn.

I will now, gentlemen, very briefly revert to the cases of epilepsy in which tracheotomy has been used. Mr. Cane's was the first, and the most splendid: life was immediately saved, and the fits were afterwards averted. Life was saved from a present danger in Dr. Herrick's and Dr. Williams' cases. The fits were reduced to a very mild and abortive form in Dr. Edwards' and Dr. Bucknill's cases.

Every event occurs to encourage the *benevolent* inquirer.

There are other applications of tracheotomy.

The patient afflicted with hydrophobia has hitherto fallen a victim to *laryngeal asphyxia* and to *nervous exhaustion*. If tracheotomy were performed the instant the *diagnosis* was made, the patient would *not* die, as he has hitherto, of this laryngeal asphyxia. Query, would he necessarily die? If the patient were, further, protected absolutely, like the frog rendered tetanoid by strychnine, from causes of excitement, he *might not* die of nervous exhaustion. Query, is it possible that even the poison of hydrophobia may be, if life were prolonged, as by tracheotomy and security from excitation, eventually eliminated from the system, and life saved?

There is still grater hope of good from these measures in certain cases of *laryngeal* tetanus. My friend, Dr. Webster, once performed tracheotomy in a case of this kind. The benefit was so marked as only to lead to a regret that it had not been performed earlier.

You will find, in a paper which I published in The Lancet about two years ago, a *list* of cases in which tracheotomy might be necessary. It is of considerable extent. It demonstrates the value of this remedy, and the importance of being *prepared* to perform it; for almost *all* the cases requiring it are cases of *emergency*, life being in jeopardy. All that is really required is a pair of pointed scissors and a teaspoon! The former may keep the orifice patent horizontally, the latter vertically, until better instruments are procured—and life is spared: indeed, the very issues of life are in some instances fearfully held, as it were, in our fingers!

Here the lecturer paused, but shortly added,—Gentlemen, I thank your kind invitation to give these lectures, and for your kind attention to them. I trust the three hours have not been spent in vain, and especially that the younger part of my audience will long remember with advantage the principles of medical doctrine which I have inculcated.

The lecturer having been invited to take the chair, Mr. Wilson rose and said that he should propose a vote of thanks to Dr. Marshall Hall for the kindness and courtesy he had shown in coming amongst them to communicate information, illustrated by experiment, concerning the physiology and pathology of the nervous system, which it had been the great pursuit of his life to investigate. The students of the Chatham-street School of Medicine should, indeed, regard the present occasion as *red-letter days*. As for himself and the rest of his professional brethren who had at-

tended this course of lectures, he could say with confidence that they deeply appreciated the philosophic views of Dr. Marshall Hall; and, when they contemplated the state of nervous physiology as it was in their own early day, and looked at it now, they must be greatly impressed with the debt of gratitude due to those eminent men who had so perfected this branch of science; foremost amongst whom he had no hesitation in placing their distinguished visitor. He concluded by moving the cordial thanks of the assemblage to Dr. Marshall Hall.

Dr. Noble had great pleasure in seconding the motion so justly and so appropriately submitted by Mr. Wilson. Thanks, certainly, were eminently due to their distinguished visitor for his kindness in coming amongst them, and in thereby giving to the gentlemen present an important advantage. They had not only had the gratification of meeting the propounder and discoverer of great physiological truths, but that also of listening to his own exposition of them, and of witnessing some of the experiments and demonstrations by which they are substantiated. And here he would observe that, however accurately such doctrines might be learnt from books, by the aid of diagrams, and by repeating the experiments, there was always an especial benefit in drinking in knowledge and valuable precepts at their spring. Look at certain analogies in literary experience. How clear and effective was the appreciation of history by him who had gone for his knowledge to the sources,—to the old quartos and the big folios, instead of to modern duodecimos! He could speak with gratitude of his own experience. He supposed it was some twenty years since that he had first applied himself to the physiological discoveries and practical teachings of Dr. Marshall Hall; probably he soon acquired a fair appreciation of their nature and value. Seven or eight years ago, however, he had had the privilege, through Dr. Hall's kindness and courtesy, of witnessing at that gentleman's own house a long series of experiments made by him, and for several days of conversing with him upon all the allied topics; and from this experience he could tell how much more clear and decided was the apprehension of facts and conclusions learnt in this way. The brief course of lectures now terminated had, in some measure, furnished the students, and the numerous practitioners who had attended the course, with a similar advantage. He was sure that they would feel, as he had felt, in having been so privileged, delighted to have been taught the physiology, and much of the pathology, of *the Spinal System* by the eminent mind that conceived the same; and to have had demonstrations presented to them by the hand that first brought them out. For all these reasons, it was with pleasure, sincerity, and pride, that he seconded Mr. Wilson's motion.

Dr. Marshall Hall then rose and thanked the mover and seconder of this vote of thanks; and, after briefly observing that nearly a quarter of a century had elapsed since he first began the studies

which led to the detection of *the Spinal System*, urged the students present to pursue their profession with enthusiasm, and early to select some special subject for study and investigation. Such a proceeding was sure, in due time, to bring its reward in reputation and in practice.—[*London Lancet.*

An account of the Cases of Dislocation of the Femur at the Hip-joint, treated by Manipulation alone, after the plan proposed by W. W. Reid, M. D., *of Rochester, which have occurred in the N. York Hospital during the past two years.* By Thomas M. Markoe, M. D., one of the Attending Surgeons.

In the "Transactions of the Medical Society of the State of New York, during its annual session held at Albany, February 3rd, 1852," is published a paper by Wm. W. Reid, M. D., of Rochester, N. York, on "Dislocation of the Femur on the Dorsum Ilii, reducible without pullies or any other mechanical power," in which it is the object of the writer to show that this displacement can be remedied "by flexing the leg on the thigh, carrying the thigh over the sound one, upward over the pelvis, as high as the umbilicus, and then by abducting and rotating it."

The fact that luxations of the hip-joint might be reduced by manipulations, not requiring forcible extension by pullies or other mechanical contrivance, seems to have presented itself to the mind of several writers both of ancient and of modern times. The idea would appear sometimes to have been suggested by accident, and sometimes to have been the result of reasoning on the mechanism of the joint, and its displacements. Such a suggestive accidental reduction occurred in the hands of Dr. Physick, and is related in Dorsey's Surgery. A patient was the subject "of dislocation of the femur directly backwards, and after very powerful efforts had been made to effect the reduction by extension, Prof. Physick, conjecturing that the head might be confined in a slit in the capsular ligament, discontinued the extending force entirely, and then, with no more force than that of his own hands, abducted the thigh, when the bone instantly slipped into its place."

A similar occurrence took place in our hospital, about the time of the introduction of the use of chloroform, in a patient with dislocated hip, under the care of Dr. Jno. C. Cheesman. While the preparations for applying mechanical force were being made, Dr. C. made some preliminary movements of the joint, while the patient was fully under the influence of chloroform, and, unexpectedly, the head of the bone slipped into its proper place. Dr. Nathan Smith, Professor of Surgery in Yale College, succeeded in reducing a luxated femur, by manipulating, with the thigh and leg used as a lever, after the usual plan had failed. It would seem from the report of this case, which, however, is made from memory by his son, Dr. Nathan R. Smith, that it was a deliberate and pre-

arranged plan of procedure, though the considerations which led to its adoption are not mentioned in the record.

Chelius, in his work on Surgery, gives an outline of the views of four writers, who have proposed to effect the reduction of the dislocated hip by the hands alone of the surgeon and his assistants, and without the aid of pullies, or, indeed, of any forcible extension. Three of these gentlemen, Wattman, Kluge and Rust, have described methods not very different from each other, which essentially consist of moderate extension with the hand, combined with movements of rotation of the axis of the limb, adduction, flexion, etc., but with the addition of force applied by a band passed around the upper part of the limb, which is committed to an assistant, and, in the different forms of dislocation, is so applied as to lift the head of the bone from its unnatural resting-place, while the other movements made with the shaft of the limb give an opportunity to the muscles, stretched by the luxation, to draw the head back into the acetabulum. Another surgeon, referred to by Chelius, Colombat, speaks of a method which he has always employed with success, in which the patient stands at a table leaning forward with his chest upon it, and the surgeon, standing behind, bends the knee with one hand, and makes the various movements of the hip-joint, while, with the other hand on the ham, he makes gradual extension by pulling downwards. By this manœuvre, he states that he dislodges the head of the bone, and without any force, accomplishes its reduction. In Casper's Wochenschrift for Nov., 1849, there is an account given by Dr. Fischer, of Cologne, of his mode of reducing luxations of the hip, which consists in flexing the femur on the trunk, and then making rotation of the limb, conjoined with adduction, or abduction, as the head of the bone is on one side or the other of the acetabulum. In the N. Y. Journal of Medicine for March, 1852, a Dr. Mayr is spoken of as having made use of this procedure of Dr. Fischer, without being aware of Dr. F.'s published statement.

Dr. Reid, in his paper, gives us an account of his observations on this subject, which appear to have been made entirely independent of any knowledge of the previous opinions of other writers. He speaks of his early impressions, on seeing the management of some cases of dislocated hip after the usual method, and gives his reasonings and reflections and experiments, on the muscular actions and the mechanical forces which were concerned, or might be employed, in the production and in the reduction of these displacements. He describes the steps by which he was led to the adoption of his mode of operation, and, what is most to the purpose, he gives five cases in which the operative procedure, to which he was led by reasoning, was successfully employed. It is no part of the object of this communication to criticise or to eulogize Dr. Reid's paper; but, having tested to some extent the value of the proposed plan, we feel that we owe to the profession a full statement of what appears to us to be a most valuable contribution

to the art of healing. It is still less our intention to mete out the degree of praise which is due to Dr. Reid as the originator of the idea upon which the practice is founded. It would seem, from the little historical sketch given above, that the idea had occurred to others before it occurred to him, and that, therefore, the barren honor of being the first suggester of the idea, that luxations of the hip might be reduced by manipulations alone, does not belong to him. All who read his paper, however, will acknowledge, that to him belongs the higher honor, of having caused the idea to assume the shape and value of a fact, and out of the bare suggestion to have, by patient, ingenious, and long-continued investigation and experiment, deduced an available, and, as we think, an exceedingly valuable addition to the resources of Practical Surgery.

Case 1.—The first opportunity which presented itself for the trial of the new method, was in the case of an Irish laborer, who was brought into the New York Hospital, November 30th, 1852, with a luxation of the right thigh. He had been struck, a short time before admission, by the cow-catcher of a passing railway train, and thrown some distance, and in his fall, probably, the accident was produced. The symptoms were those of the dislocation on the dorsum ilii, the head lying rather lower down and nearer the ischiatic notch than usual. The thigh was shortened about two inches, tended across the other, with the ball of the great toe of the injured limb touching the instep of the other foot, fixed in its position, and the head of the femur was felt in the position above described when the thigh was rotated on its axis. In addition to this injury, he had received a compound fracture of the left leg, three inches above the ankle, together with a good deal of bruising of other parts of his body. The patient was etherized to the extent of complete relaxation, and Jarvis's Adjuster was applied. It broke on the first trial of extension, and was laid aside. This mischance suggested the trial of Dr. Reid's plan, which was accordingly adopted. The operator, Dr. Buck, after bending the leg upon the thigh, gradually adducted the thigh, while at the same time it was being flexed upon the trunk. Carrying the limb thus bent at the knee, and strongly adducted, over the sound thigh, by a gradual sweep over the abdomen, and then slowly and steadily abducting the limb so as to carry the knee outwards, making at the same time a rocking motion by moving the leg backward and forward, had the effect of dislodging the head of the femur from its new position, and making it approach the acetabulum; but it did not enter the socket. From the position above indicated, the limb was now brought down slowly towards a straight position, still kept in a state of forced adduction. This last manœuvre seemed to have a very powerful influence in forcing the head towards the acetabulum, but the whole proceeding was completed without success. It was observed, however, that the head had been moved a little higher on the dorsum than it was before. The same manipulation was now again practiced

more deliberately and more carefully than before, and as the limb was being brought down abducted, we had the satisfaction of seeing and hearing the reduction effected, by the head of the bone slipping into its socket. All deformity had disappeared, and the motions were free in all directions. The other injuries were properly attended to, and the recovery from the effects of the luxation was rapid and satisfactory. He finally recovered from his compound fracture also, and left the hospital with a good leg and a perfect hip.

Case 2.—An Irish laborer, aged 25, received an injury of his right hip, and a fracture of one of his clavicles, by being thrown from a railroad car, while it was in motion. He was received into the New York Hospital, December 8th, 1852, under the care of Dr. Halsted. On examination, the injury to the hip proved to be a luxation of the femur upwards and backwards on to the dorsum ilii. The patient was placed immediately under the influence of ether, and the reduction was attempted by a procedure nearly the reverse of that above described, in Case 1. The leg being flexed upon the thigh, the limb was flexed upon the trunk and carried up in a state of abduction, then across the abdomen, and being fully adducted, was, in that state, brought down to the straight position. The effect of this mode of operating, which is almost precisely that said to have been employed by Prof. Nathan Smith, was to throw the head of the bone forwards, under the anterior superior spine of the ilium, and it was quite evident that a very little more force in the same direction would have brought it upon the pubes. This plan was therefore abandoned, and Reid's manipulation was tried carefully and without the employment of much force. On the first trial it was successful, the bone being reduced with an audible snap, as the limb was being brought down in a state of abduction. The recovery was rapid and perfect, and he was discharged, cured, January 15, 1853.

Case 3.—Charles O. Merritt, a sailor, thirty-seven years old, of a stout, vigorous frame, was admitted to the hospital with a luxation of the femur, of twelve weeks' standing. Attempts had been made, by an excellent surgeon of this city, to reduce the bone, but without a satisfactory result. A very careful examination was given to the limb by all the surgeons of the Hospital who were present, and all agreed that the head of the femur was thrown upon the dorsum of the ilium, in the usual situation; but some doubt existed whether there might not also be an injury of the acetabulum itself. The patient being fully etherized, Reid's manipulation was tried, and, on the first trial, failed, the head seeming to remain nearly in the position it occupied before the operation was commenced. Dr. Watson, under whose care the patient was, now made a second more careful effort, using more force in making all the movements, but being particularly careful to make forced abduction while bringing down the limb from extreme flexion to the straight position. As the limb was thus descending, slight

rocking motions being at the same time employed, the reduction was suddenly accomplished, the head of the bone being felt, or heard by a great number of persons, to slip into its socket. The limbs being laid side by side, all deformity had ceased, and all present were satisfied that the reduction was complete and perfect. The patient's knees were bandaged together in the usual manner, and he was placed in bed with rather more care than usual, but in less than an hour it seemed as if the joint had lost its natural appearance again in a slight degree, and the apparatus was tightened. By next morning, however, it was too evident that the original displacement had again occurred, and to its fullest extent. This had taken place in spite of the greatest quietude on the part of the patient, who was a very intelligent, tractable person, and fully aware of the importance of keeping the joint unmoved. The manipulations were again tried several times, but without effect. The head of the bone seemed to move about freely in all directions, but could not be brought into the acetabulum. The limb was put up in the straight apparatus which we usually employ for fractures of the thigh, and extension, by the adhesive straps, was kept up so as to keep the parts, as nearly as possible, in proper position. A good deal of stiffness and swelling of the joint followed, which, however, subsided, and he was allowed to go about on the 30th January. He finally gained about as much use of the joint as if there had been a fracture of the cervix femoris. I am informed by Dr. Buck that he has since gained a very excellent use of the limb.

Case 4.—John Kelly, a laboring man, aged twenty-one years, was admitted May 22d, 1853, having been knocked down by a horse-car, by which a luxation of the left hip had occurred into the ischiatic foramen. The limb was shortened about one inch, toes turned inward, and the head of the bone felt in its new situation. The reduction was attempted by the mode described above, the man being fully relaxed by ether. The effect of the first attempt was to throw the head on to the obturator foramen, making the limb longer than the other, and producing the deformity characteristic of that dislocation. From this point, by a slight alteration of the movement, the head could be made to slip back to its original position. Between these two points it could be made to play backwards and forwards, but would not enter its socket. Dr. Post, in whose charge the patient was, then employed the usual mode of reduction, from the foramen ovale, viz., extension of the limb, combined with a lifting of the head of the bone over the edge of the acetabulum, by the help of a folded sheet passed round the upper part of the thigh. This proved successful, without resorting to the pullies. In this case the cure was very slow, and he left the Hospital with some degree of pain and swelling about the joint. I learned that an abscess formed in or about the joint, which was opened, and when I saw him a year after, there was every appearance of seated morbus coxarius.

Case 5.—Michael Delany, a boy aged eight years, was admitted into the house June 29th, 1853, having received very severe injuries in falling from a ladder, at the height of the third story of a house, to the ground. There was found to be a bad compound fracture of the right thigh, and simple fracture of the left. When laid upon a bed, and his clothes removed, the right thigh, which was the seat of compound fracture, was found to be in an extraordinary position. It lay obliquely across the abdomen of the boy, with the leg and foot lying up by the axilla of the left side. On examination, it was discovered that this singular position was rendered possible by the fact that the head of the femur was dislocated backwards and upwards, on the dorsum ilii. The house-surgeon, to whose care the case fell on admission, took the injured limb in his hands and very carefully carried it over the abdomen to the right side, and then abducted it and brought it down towards the straight position, thereby completing the steps of Reids manipulation, which accident had already commenced. In doing this, the head of the bone slipped into its place, and the hip gave no further trouble. The fractures of both thighs went on favorably towards a cure, and he was discharged well, August 23, 1853.

Case 6.—John Gallagher, twenty-eight years old, a stout Irish laborer, was brought into the Hospital about half an hour after he had fallen from his cart while intoxicated. He was found to have a dislocation of the left femur upon the dorsum ilii, and was immediately sent to the operating theatre and placed fully under the influence of ether. I then proceeded to employ the manipulation above described, but as we were completing it by bringing down the limb strongly abducted, it became evident that the head of the femur was about to slip below the acetabulum into the foramen ovale, as had occurred in Dr. Post's case, No. 4. The movement was therefore reversed and again more carefully tried, with the same result. On the third trial, with the view of avoiding this tendency of the head to be forced below the acetabulum, I brought down the limb in a state of very slight instead of very strong abduction, making the movement very deliberately, and accompanying it with the usual rocking motions of the limb on its axis. This plan was perfectly successful, and the bone slipped easily into its place, and the cure was rapid and perfect. All the movements in this case were made with the greatest facility, and without the necessity of employing any more force than the weight of the limb required.

After the reduction in this case, I made a dissection of the hip-joint in a recent subject. I had previously made several dissections with reference to the action of the different muscles and their condition after luxation. In this instance, however, I removed all the muscles, leaving the capsular ligament only, and then endeavored to dislocate the head of the bone. I first tried adduction, and carried the limb so forcibly over the abdomen that the knee touched the anterior surface of the thorax, but without producing

luxation. On making more violent efforts in the same direction, the cervix fractured or rather cracked across within the capsule, and soon after the ligament itself tore across at its superior and posterior part, just opposite the point of yielding of the cervix. The laceration was directly across the ligament, and occupied about one-half of its circumference. As soon as this took place, the dislocation was easily effected. The neck of the femur and the trochanteric portion of it were now seen to be kept in their place by the untorn portion of the capsular ligament, which acted as a sort of fulcrum, upon which, by using the limb as the long arm, we could make the head, as the short arm, move about in any direction upon the surface of the dorsum of the ilium. On making the manipulations for its reduction, the head was observed to pass behind the acetabulum until it reached its lower margin, and if the thigh was brought down slightly abducted, it slipped easily over this least elevated part of the margin into its socket. If, however, it was brought down very strongly abducted, the head, instead of passing into, went below the acetabulum, and passed on to the foramen ovale, as it was about to do in Gallagher's case, No. 6, and as it did repeatedly do in Kelly's case, No. 4. Still further, we observed that after we had reduced the bone it slipped very easily out of place again, and this was explained by finding that in the reduction, the head had not gone back through the rent in the capsular ligament, but, remaining outside, had pressed the capsule before it into the acetabulum. This, of course, prevented the complete reception of the head of the bone into the socket, and permitted it to slip out again with the greatest facility. This entanglement of the head in a button-hole opening of the capsular ligament is noticed by many surgeons as an obstacle to complete reduction by the old plan with the pullies, and I do not perceive that the new method offers any advantages in this particular. Might not this have been the condition of things in Merritt's hip, Case No. 3?

Case 7.—Francis Cotbunger, an Irish turner, was admitted to the N. Y. Hospital, December 12th, 1853, with a dislocation of the right hip. The accident had occurred about four weeks previously, and had been treated in the country, as a sprain, by leeches, etc. The limb was lengthened, the toes everted, and the whole limb stood off from the body abducted, and slightly flexed, symptoms which clearly showed that the head of the bone was upon the foramen ovale. The patient being fully brought under the influence of ether, a manipulation the reverse of Reid's was employed by Dr. Halsted. The leg being bent upon the thigh, the thigh was gradually flexed upon the trunk until the knee touched the thorax. The limb was then brought down, forcibly adducted, into the straight position. By this the head of the femur was moved from the foramen ovale on to the dorsum ilii. Being in this situation, Reid's method was adopted, with the effect, however, of bringing back the head to its original position on the fora-

men ovale. By a repetition of the first manœuvre, it was again thrown on the dorsum, and from there, by Reid's plan, again thrown back upon the foramen. After repeated attempts, the bone was finally reduced by the pullies from the dorsum in the usual way, this being the only instance in which the pullies or Jarvis's Adjuster have been used, since our attention has been called to the new plan. It will be noticed, however, that the limb was every time brought down in a state of forced abduction; the moderate abduction found successful in Gallagher's case, No. 6, was not tried. A good deal of swelling and pain in the joint followed these various operations. He was up and about, however, by the 5th January, and on the 13th, he was discharged, cured.

Case 8.—Hugh Doyle, a sailor, 22 years old, was admitted to the Hospital, April 22d, 1854, with a dislocation of the left thigh upon the foramen ovale. The limb was in a position of abduction, rotated outwards, with the foot resting on its outer edge. The muscles arising from the pubes and ramus of the ischium were very tense, adduction was impossible, and the prominence of the trochanter was gone. From this deformity, the position of the head, with regard to the acetabulum, was clear. He was also suffering from other severe injuries, which had been produced by the fall, in which the hip was luxated. He was put fully under the influence of ether, and the reduction was first attempted in the usual way, by Dr. Buck, by direct extension of the limb in the direction of its axis, while at the same time the upper part of the thigh was lifted forcibly outwards by means of a sheet folded round it. This had not the desired effect, and would have required the pullies to make it effectual. Another manipulation was then tried. The leg was flexed upon the thigh, and the thigh upon the trunk. The foot was then pressed forcibly outwards, thus rotating the thigh inwards on its axis, and giving the head of the bone an inclination outwards towards the ischiatic notch. The pelvis at the same time was held firm by assistants. This was repeated twice, each time with the effect of causing the head to move considerably from its resting-place, but without entering the socket or going over to the notch. On the third time of making the manipulation, the thigh was brought down from entire flexion to a little below a right angle, and while in this position the foot was again forced outward as before. This plan proved successful, and the head of the bone slipped into its proper place in the acetabulum. This was accomplished without any considerable force or difficulty. The cure went on favorably, and without unusual symptoms.

Case 9.—Fritz Frieze, aged 38, a German sugar refiner, came into the Hospital, May 23, 1854, with a luxation of the left thigh, which had occurred fourteen days before from a fall. The surgeon who first saw him pronounced it a mere contusion, and had allowed him to walk about, which he was able to do without much

pain, though, of course, with a very great halt in his gait, and with great labor in the movements of the injured hip. As he stood erect, the left thigh inclined outwards and forwards from its proper direction, the toe of the injured limb touching the floor about ten inches from the other foot. The limb was an inch longer than its fellow, and the adductor muscles were tense. Adduction was impossible. The trochanter was fallen in towards the pelvis and thrown backwards and downwards. On making rotation, the head of the bone could be indistinctly felt moving on the foramen ovale. After having the patient fully relaxed by ether, I made some free movements of the limb in all directions, with a view of breaking down any adhesions which might exist. I then took hold of the ankle of the injured limb with the right hand, while I supported the thigh with the left; I flexed the knee to a right angle, and moving the thigh a little forwards, to relax the tense adductor, I forced the foot inwards, making, at the same time, a rocking motion of the whole limb on the pelvis. My idea was, by rotating the thigh outwards, to throw up the head of the bone towards the acetabulum, from which it could not be distant more than an inch. This manœuvre was not successful, though carefully and repeatedly tried. We then tried the plan adopted by Dr. Buck, in Hugh Doyle's case, No. 8, with the effect of throwing the head upon the ischiatic notch. By reversing the movement, the head was easily thrown back to its previous position on the foramen, and the first manipulation was again tried, combined with a movement of strong adduction in a direction which carried the knee behind the other one. This, accompanied with the rocking motion, which we have found useful in all these replacements, accomplished the reduction on the first trial, and without the slightest violence or excess of force. The head slipped in with an audible snap, and the limb assumed its natural shape and position. The cure was rapid and perfect.

The two last cases were experimental, as we had no knowledge of any recorded precedent which gave us any assistance in their management. We were led to adopt the modes of manipulation, simply from reasoning on the effect which the movements of the thigh would produce on the position of the head of the femur. An attentive examination of the skeleton, with the head of the femur placed on the foramen ovale in the position it assumes when luxated, will show that, while the head lies upon the foramen, the neck lies along the side of the pelvis in such a manner as to bring the trochanter about opposite to, and a little below, the acetabulum. If, now, we hold the trochanter fixed with one hand, and make the two movements described in Cases 8 and 9, it will be observed that the head can be brought into place by both of them; but, at the same time, it will be observed that, when the trial is made by rotating the thigh inwards, thereby causing the head to move outwards, the head, in order to reach the socket, has to pass through a sweep of $\frac{3}{4}$ of a circle, and then crosses the lip of the acetabulum

at a point where it is very prominent and very difficult to surmount. If, on the contrary, the rotation of the thigh is made outwards, so as to throw the head inwards, it has only a space of about an inch to pass through in order to slip into place, and the portion of the brim over which it passes is much less elevated and prominent. The movement of adduction in a direction a little backwards, as employed in Case 9, has evidently the effect to lift the head over the edge of the acetabulum when the rotation has brought it to that point. It will also be noticed that in the outward sweep of the head, it has, in order to get up to the acetabulum, to pass by the ischiatic notch, into which it is exceedingly prone to slip, as actually occurred in Case 9, and also in Case 4. For these reasons, I am disposed to consider the manipulation employed in Case 9 to be the correct and most effectual one in this form of luxation, and that though in a recent and favorable case the outward movement of the head might succeed, yet that in a difficult or long-standing case it would fail entirely, or be attended, if successful, with a great degree of violence and laceration. This is a point, however, which can only be settled by more ample experience and careful experiment. From the comparative rarity of this form of luxation, this experience can only be slowly obtained, and we should feel greatly indebted to any gentleman who may have an opportunity of managing such a case by manipulation, if he would transmit to us the results of his experience.

[To be concluded in May No.]

Normal and Diseased relations of Skin and Mucous Membrane.
By Alfred Hitchcock, M.D., Fitchburg, Mass.

In the following paper an attempt is made to show the anatomical identity of the skin and mucous membrane; and also to trace the Pathological analogy observed in these textures, and therefrom to deduce Therapeutical principles.

The subject naturally divides itself into the Anatomy, Pathology and Therapeutics.

I. The Anatomy. The skin is a very complex texture. Three principal layers form its structure—the Epidermis, the Papillæ, and the Cutis vera.

The Epidermic layer, which was formerly called an inorganic, concrete exudation from the cutis vera, is now proved by the microscope to consist of epithelial cells of a definite form and vital character. Next beneath is the layer of papillæ, which consist of minute conical or cylindric elevations, which are more prominent on the palms of the hands and soles of the feet than in other parts; these elevations are highly endowed with blood-vessels and nerves, and are the medium of the sense of touch. Below this lies the cutis vera, a dense, tough, highly elastic structure composed

of fasciculi of fibro-cellular tissue interwoven in all directions and forming by their interlacements numerous spaces or areolar. Besides these, anatomists speak of the retemucosum lying next below the epidermis and giving color to the skin; this, however, is proved by the microscope to consist of the last deposited layer of epitheliel cells. Beneath the cutis vera also is found a layer of adipose tissue in which lodge the sudoriferous glands, whose open ducts penetrate all the layers and appear on the surface. These *sweat glands* are most numerous in the palms of the hands and soles of the feet, and are demonstrated to number from four hundred to three thousand on a square inch on different parts of the body. The sebaceous glands, secreting an unctuous semi-concrete fluid, are very abundant in all parts of the body, excepting the palms of the hands and soles of the feet. They are observed to be most numerous in the axilla and scalp and around those parts where the mucous and cutaneous membranes coalesce. The hair follicles penetrate all the layers of the skin, their origin being in the fatty tissue beneath the cutis vera. All the hair follicles, the sudoriferous and sebaceous gland ducts that have so many countless outlets on the skin, are all lined with epithelial cells or rather a thin reflection of the epidermis. The skin carries on the double function of excretion and absorption, and the importance of these functions to a healthy state of the animal economy can scarcely be too highly estimated.

The mucous membranes line all those passages by which internal parts communicate with the exterior, and by which either matters are eliminated *from* the body or foreign substances are taken *into* it. They are soft, moist, velvety and extremely vascular. The external or free surface is everywhere lined with one or more layers of epithelial cells rendering it quite like the epidermis. Beneath this lies a basement membrane of firm texture and somewhat corresponding in structure to the cutis vera—next is a stratum of vascular tissue with outgrowths and depressions in the form of papillæ and villi, some of which form glands. In differents parts of various tracts of mucous membrane certain structural peculiarities are observed which adapt each part to its peculiar function. The numerous gland ducts which open on the mucous membranes are all lined with an epithelial membrane.

This is the general anatomical arrangement. In addition it should be stated that many of the different forms of epithelial cells have cillia or fine pellucid processes on their free extremities which are constantly in rapid vibratory motion. These cilliary processes have an important influence in the function of secretion and propulsion of fluids in the various membranes and ducts. In the pulmonary and uterine mucous membranes especially, the cilliary processes of the epithelial cells are very conspicuous and act an important part in the functions of these organs. The mucous membranes are everywhere abundantly supplied with glands—many of them quite corresponding to the sudoriferous and seba-

ceous glands of the skin in structure—and like them moistening and lubricating the surfaces on which they open. The specific function of the mucous glands is not quite so clearly understood as the corresponding glands on the skin. In the alimentary canal, they unquestionably play an important part in the function of digestion. In the small intestines numerous villi exist which play an important part in the absorption of chyle.

The mucous membranes universally like the skin, perform the double function of absorbing and exhaling certain fluids—and this function is in addition to the various special functions performed by different sections or parts of each of these tissues. In this common function of absorption and exhalation they come under the domain of organic life—and in their common sensibility and impressibility to temperature and the physical properties of matter applied to their surfaces, they are alike related to animal life, and they consequently are both abundantly supplied with nervous influence from the sympathetic and cerebro-spinal systems.

The parallelism of function in these two membranes is very striking, and consequently the sympathies between these two orders of tegumentary tissue is very strong and active. A little more fully it may be stated that from the skin carbonic acid and nitrogen are exhaled as they are from the mucous membranes, and both discharge vapor or sweat charged with salts and effete animal matter.

The sebaceous glands find a counterpart in the follicular glands of the mucous membranes. Gaseous and fluid matters find entrance into the general system through the skin with a slower but with as certain a process of absorption as they do through the mucous membranes. It is also proved that nearly every article of the materia medica which is absorbed from the surface of mucous membranes may also with great certainty find entrance through the skin by absorption, and thus exert their distinctive and specific effects on the various organs of the body.

II. Pathology. The anatomical identity and reciprocal influence of the skin and mucous membrane constitutes a most important consideration in the pathology of cutaneous diseases. Eruptive diseases of various kinds are often the result of crude and irritating ingesta and those which are acute are almost invariably preceded by derangement of the mucous membrane of the alimentary canal, and especially of the throat and stomach. On the other hand any extensive inflammation of the skin whether from a burn or a contagious exanthem is quite likely to be accompanied or followed by mucous irritation or inflammation. If the cutaneous inflammation is pustular or eliminates a morbid secretion the danger of the supervention of mucous disease is greatly increased.

It is found to be a physiological law of the cutaneous and mucous membranes, that if either is physiologically excited, the function of the other is proportionately diminished; and if either is

pathologically excited, the other takes on identically the same morbid action. In this connexion it may be stated, what was long ago demonstrated by Dr. James Johnson, editor of the London Medico-Chirurgical Review, that the healthy functions of the skin and liver are always *consentaneous*, and never vicarious. In other words when the state of the skin was genial and healthy and its function easily performed then the function of the liver was in a correspondingly healthy state, and *vice versa*.

In studying cutaneous diseases, we find that many causes act directly on the skin—as climate and seasons, temperature, all poisons, friction, artificial heat, uncleanly habits, &c.,—and many of these casual eruptions are well known secondarily or sympathetically to be transmitted to the mucous membranes: in precisely the same way we find diseased action in these membranes from causes directly applied to their surface, producing sympathetically or secondarily cutaneous eruptions, as for example, *roseola*, *urticaria* and *strophulus* from noxious ingesta. Many cutaneous affections are hereditary and then the play of sympathy between these two membranes is very marked, and the strife for the domicil of the disease is often quite eccentric.

Syphilitic eruptions, leprosy and cutaneous tubercles are remarkable forms of disease dependent on depravation of the blood and general constitutional deterioration, and are almost always strongly marked by corresponding morbid action in the mucous membranes.

Nearly all the exanthemata attack both the cutaneous and mucous membranes. Urticaria, Measles, Scarlatina and Variola are notable examples. In most of this class of diseases the cuticle desquamates, and the mucous membrane in the affected parts casts off its epithelium in like manner.

Erythema is also a disease quite as distinctly recognized on the mucous as the cutaneous surface. Genuine erysipelas in its full development *is not* as distinctly visible on mucous membrane, for the reason that there is no tissue corresponding in character and quantity to the sub-cutaneous cellular tissue which is well known to be the favorite location of that disease.

Some of the bullæ have been observed on the mucous membranes as well as on the skin;—and diphtheritic inflammation has been shown to occur on the skin as well as the mucous membrane. Membraneous croup and membraneous dysentery are the two most notable examples of this disease, and both have been shown to be in some degree contagious. It is also asserted by some Pathologists that contagious or hospital gangrene throws out a diphtheritic membrane identical in character to those of the two contagious diseases just named. It has often been observed in fevers of bad type that the skin will throw out the same kind of false membrane especially if the surface has been abraded by a blister or other external irritant. This tendency has been thought in some degree to mark the virulence of the disease.

There is a form of diphtheritic inflammation of the mucous membrane which is frequently observed in this vicinity, especially towards the end of summer and in autumn. It is sometimes preceded by slight dysenteric symptoms, mild fever, and great vital prostration. The fauces and mouth are at first of a violet or scarlet red, soon becoming spotted and at length entirely covered with a white pultaceous exudation which sometimes exfoliates and is several times reproduced. There is feeble capillary action—with tendency to coldness of the parts most remote from the heart; and it is common to observe transient red spots on the face, neck, and sometimes the extremities—and in severe cases these spots are livid—and almost always there is a general exfoliation of cuticle as the patient recovers. Sometimes there is violent delirium but more frequently the cerebral functions only partake of the *general* torpor and prostration. Sometimes sweating occurs, but more commonly the skin is parched and dry. The pulse is usually soft and never so quick as in true typhoid fever—even though there is the same apparent degree of vital prostration.

This diphtheritic disease seems occasionally to be epidemic and contagious, affecting whole families and neighborhoods; and the duration of the disease may be one week or one month, according to treatment or accidental influences. This disease is very often mistaken for "*follicular enterite*" or true typhoid fever. It is a very great error in Pathology to confound the two forms of disease and in a statistical point of view cannot but be very unfortunate to the cause of medical science. The two forms of disease undoubtedly are occasionally combined in the same individual, and yet it seems very important that their distinctive pathology should be duly estimated.

This diphtheritic disease is here alluded to in order to call attention to its *cutaneo-mucous pathology*—and not to give a detailed account of its history and character—that being of itself well worthy of a distinct and lengthy paper. The eruptions and gangrenous patches of the skin in *typhoid* and *typhus* fevers are well known to be clearly assimilated to the follicular eruptions and scarlet and gangrenous patches that occur in the course of the intestinal canal in those diseases.

Psoriasis of the mucous membranes, exactly like the same disease on the skin, has been abundantly shown to exist in some large institutions where microscopic investigations have been adopted as a means of diagnosis. The eye alone can discover it at the outlets of mucous canals—and the shreds which escape from the bowels exhibit precisely the same microscopic appearance as the cutaneous elimination. These subjects invariably show loss of nutrition, are pale and nervous, and present many anomalous symptoms. There is great debility but they are not usually benefitted by tonics. It is highly probable that other varieties of squamous disease may likewise be proved to exist on the mucous membranes. These several forms of cutaneous disease already

enumerated and proved to exist on the mucous membranes, are sufficient to establish a general pathological law;—and analogy would lead us to infer that many other, if not all the different varieties of eruptive diseases have the same tendency to development more or less perfect in the mucous membranes. Many Pathologists are of opinion that nearly all cutaneous diseases are more or less contagious—and that they are strictly Parasitic—having an independent animalcular or cell vitality—and finding an appropriate *nidus* in the skin and mucous membranes—and possessing a power of existence and reproduction limited only by exhausting their proper *pabulum*. Variola, Varicella and Rubeola soon exhaust the pabulum and cease spontaneously, rendering the patient invulnerable to another attack, or in other words leaving the soil unfitted for another crop.

Some cutaneous diseases seem never to exhaust the soil, and with age become more tenacious of the domicil, and consequently require the application of a poison to destroy their vitality—hence the use of Mercury, Arsenic, Sulphur, Tar, Iodine and Antimony with success in many forms of cutaneous disease.

III. The Therapeutics. On this subject, usually so prolific of good advice and complicated prescriptions a few general principles only, will be briefly alluded to.

It will be well for the practitioner to enquire

1st. Is the disease dependent on some cause that will cease spontaneously, or that can very easily be avoided?

2d. Is the disease of specific origin and self-limited, and will it result in a natural cure?

3d. Is the disease contagious, with unlimited tendency to increase and consequently requiring the local application of a poison for its removal?

4th. Is the disease hereditary or vicarious and would it be safe to suppress it?

5th. Is a due estimate placed on the danger of increasing the same morbid action in the mucous membrane by the internal use of drugs for curing the cutaneous disease?

6th. Is the remedy safe and will it best promote the permanent welfare of the patient?

The general principles implied in a correct answer to the foregoing queries are quite sufficient to guide the physician to a safe and judicious practice in the treatment of cutaneous diseases.

The important Pathological law stated in a former part of this paper, viz: That in a state of physiological excitement or increased natural function of the skin or mucous membrane the other is correspondingly diminished in function—Whereas, *when either is pathologically excited* the *other is sure to take on the same kind of morbid action.* This principle is fundamental and should never be lost sight of in prescribing for cutaneous diseases. This principle, rightly understood, would not diminish confidence in the use of

medicines, but would lead to a more careful investigation of the Pathology of cutaneo-mucous diseases, and consequently to a more judicious, safe and successful application of remedies.—[*New Hampshire Journal of Medicine.*

On various rare forms of Peritonitis. By GEORGE BUDD, M. D., F. R. C. S., Professor of Medicine in King's College Hospital, London.

GENTLEMEN,—I propose to day to bring under your notice a peculiar form of peritonitis, not often met in practice, but still, when it does occur, very specific and well marked; but first we will recall the more marked symptoms in the case which has led me to choose this subject; the case will occur to the recollection of many of you, as having been so near the jaws of death, but is now quite recovered.

F. R., a poor young man, 18 years of age, you recollect the case in the last ward we left, and which we watched for some time with no ordinary anxiety. He tells us he has been two years and a half in London, has lived badly previous to admission, and suffered a good deal in health; for a full month before coming into the hospital he has been "out of health and feverish." This, perhaps, in his case, has a more serious signification than it usually has, for on admission on October 15th, we find him saying he was in every way worse, and no longer able to stand; his belly is intensely sore to the touch, he has completely lost his appetite, and is troubled with vomiting: he has almost all the bad signs of hernia without that disease at all; in other words, we have here a form of peritonitis.

18th: We find him still complaining of excessive pain and soreness, percussion is dull all over the abdomen, fluctuation is very obvious; in fact the peritoneal cavity was full of fluid; another point, (and one which I would particularly impress on you in peritonitis,) the belly was *quite motionless*, the muscles of the abdomen, so to speak, lose their function for a time, and the respiration is entirely carried on by the thorax; on further examination, we are told the urine is albuminous; the pulse is only 74; the tongue is furred, and he sweats at night. Now, in cases of peritonitis of this kind, you must always look out for tubercles; there was no positive evidence in this case of such a morbid deposit, but it looked like it.

One of the best remedies is a blister over the belly, and this was accordingly ordered; it helps to check the irritation at once. On his coming in he was ordered calomel and opium, but as we had reason to fear a tuberculous taint, I left out the calomel. We gave him, however, a ʒvi. mixture instead, composed of salines, nitre, and hyoscyamus, with the opium by itself. Under this plan you will remember he went on very well; four days after the

veins over the abdomen swelled, more particularly in the hypogastrium. I think I have noticed, when the circulation is very much impeded in the liver, the veins of the groin and hæmorrhoidal vessels swell, and as an ordinary rule may be taken as an indication of such a state of things. About the fifth day, the 23d, he seemed to be falling back again, and as there were no tubercles, we gave him calomel gr. iss., opii. gr. $\frac{1}{4}$, every six hours, and on the 25th the report states, "percussion is now resonant, there is also movement of the belly;" in other words, there was a manifest amendment; appetite is also said to be returning. Again, on the 30th, we read this report, "the belly is not so tense, the fluid is becoming absorbed, it is thought better to discontinue the calomel, the mouth is sore." We may now pass over the reports for a fortnight, as the poor young man has turned the corner, and has been improving, indeed pulling up wonderfully every day.

13th: Appetite much better; urine has lost its albumen; he is in every way better. We now ordered him cod-liver oil, with a mixture containing tincture of hops and hydrocyanic acid. 15th: Reported quite well.

Now, in speaking of peritonitis, it is a useful clinical distinction, as we see it every year in the wards, to divide the different kinds into general and partial, local or constitutional peritonitis; local or partial peritonitis you will see, perhaps, in surgical wards.

You will find local peritonitis in diseased liver or spleen, diseased ovary or uterus; general peritonitis, on the contrary, is brought about by a poison in the blood, by puerperal fever, sometimes by erysipelas, or, as we suspected in the present case, by tubercles. Perforation of the bowel, ulceration of the gall-duct, &c., also bring on, we need scarcely say, the most fatal forms of peritonitis. In tuberculous peritonitis, the tubercles are dotted over the peritoneum; this membrane, in fact, is studied with them. This disease is slow and chronic, precisely similar to the case of this young man. I believe the disease we are now considering in this young man, though true peritonitis, is brought on by cold. The pain and tenderness in this case was very great; the patient cannot stand erect; the legs are drawn up; he is found to suffer most severe agony; sometimes from flatulence rolling along the bowels, or when the bladder is emptied or bowels moved—anything, in fact, that prevents them lying at rest, a point gained by giving opium. A very essential question is this. How do we know it is not dropsy in place of peritonitis? but by a little manipulation you can tell at once. In dropsical effusion there is less or no pain, and fluctuation is more marked; in peritonitis, on the other hand, the fluid, so to speak, is in detached pouches; the belly, as we noticed before, is motionless; there is also vomiting attending this form of disease; the previous history will also assist you. In peritonitis there is more or less fever, &c. Now, what is the cause of this form of peritonitis? Andral says, all cases of chronic peritonitis above fifteen years of age have tuber-

cles. I believe this rule, though a good one, yet a little too absolute. (Peritonitis often prevails, epidemically, among lying-in women, and too much ground exists for believing it is even propagated by contagion. This is a very terrible and fatal disease, but rather comes under the subject of obstetrics.) Louis says, he has never met tubercles in the peritoneum, but they were also to be found in the lungs; this rule also is not universally true, according to Dr. Watson.

I would now wish to direct your attention to treatment. In all cases of peritonitis in patients of a good frame or habit of body, you should first put on a large number of leeches. If you think your patient, as in the case of the boy in the present case, will not stand depletion, in place of leeches put on a blister. Calomel, in ordinary peritonitis, is your most valuable medicine; in tubercular peritonitis mercury is not advisable, indeed it will aggravate matters; in place of it you must order salines, to set the kidneys to work and act on the skin. Nourishment, especially cod-liver oil, I find a most valuable adjunct also in this form of tuberculosis; the remedy of all others, however, which you must not forget, is counter-irritation on the surface of the belly. You will not, perhaps, at least in the ill-fed and poor of hospitals, require much bleeding; blisters must not, however, be forgotten. There is another disease of this class, peritoneal inflammation from perforation of the vermiform appendix; this part you will recollect opening into the cœcum, whence a cherry-stone or other foreign body may ulcerate out. I knew two cases die very suddenly from this; peritonitis is first set up, lymph is thrown out, and glues the parts together; fever of a puzzling kind sets in; there is pain, but probably no constipation; your own knowledge of the parts and general principles must guide you in treatment.

Another, but rarer disease still, is an affection with peritonitis, and what may be best described as a fistula of the cœcum, like fistula in ano of surgeons. Now and again you will meet this, and you should be prepared for it; there is very much less pain and tenderness; it is situated in that part of the cœcum deprived of peritoneum; leeches, if there be pain, will in all these cases relieve the want of *tone of the bowel* better than purgatives; muscular fibres are partly paralysed, depletion will do more good than stimulating the bowel, and open the bowels more readily than cathartics.—[*Medical Circular*, and *Dublin Med. Press.*

Climacteric Disease. By Stephen W. Williams, M. D., Laona, Winnebago county, Ill.

It is the duty of physicians at all times to endeavor to correct errors in their profession, as well as to communicate facts in relation to the cure of disease; and on this account I am induced to make a few remarks on a form of medical superstition which still

obtains many adherents. There can be but little doubt that the idea still prevails, to a certain extent, with the people, and even with the enlightened portions of the community, as well as with many physicians, that at every seventh year, which is called the climacteric year, the body undergoes an entire renovation, and that great and important changes take place at that time. These are called critical periods, or climacterics, and they are said to occur at the ages of 7, 14, 21, 28, 35, 42, 49, 56, 63, &c. The age of 63 is called the grand climacteric, or critical period of great danger, at which the greatest change in human life is supposed to occur. The multiplication of 9 by 9, which makes 81, is supposed to be another grand climacteric.

Dr. Darwin says—"Ignorance and credulity have ever been companions, and have misled and enslaved mankind. Philosophy has in all ages, endeavored to oppose their progress and to loosen the shackles they have imposed. Philosophers have on this account been called unbelievers; unbelievers of what? Of the fictions of fancy, of witchcraft, hobgoblins, apparitions, vampires, fairies—of the influence of stars on human actions, miracles wrought by the bones of saints, the flights of ominous birds, the predictions from the bowels of dying animals, expounders of dreams, fortune tellers, conjurors, modern prophets, necromancy, cheiromancy, animal magnetism, with an endless variety of folly." To which I may add the royal touch, the touch of a dead man's hand, spiritual intercommunications, eclecticism or Thomsonism revived, homœopathy, hydropathy, phrenology, as exclusive systems of medical practice, and a whole round of empiricism needless to enumerate, to which the indolent and crafty resort to get rid of the toil and labor of procuring regular professional knowledge. These may all be placed on a par with the belief in climacterics. "These," continues Dr. Darwin, "philosophical physicians have disbelieved and despised, but have ever bowed their heads to hoary Truth and Nature."

As it is the subject of individual climacteric years, in which many intelligent men of the present day express their belief, it shall be my object to expose the fallacy of such a belief. This opinion has been prevalent in connection with the subject of vaccination. In the early days of inoculation many people expressed their fears that its efficacy would not extend beyond seven years, or further than any climacteric year, and that the human body did not then consist of the same particles of matter as before. True it is that great changes take place in the system at the age of puberty, which occurs at different periods in this climate; and also at the change of life in women, which also occurs at various periods, from 45 to 55. That the cowpox acts with diminished power, as the subject advances in life, is now acknowledged by all who have thorougely examined the subject, and the same is also true in relation to the smallpox, hooping cough, and numerous other contagious diseases; but it has nothing to do with the climacteric

disease in question. It however suggests the great importance of frequent re-vaccination.

The subject of age, however, demands some attention in the history of the human economy. By the laws of the land, certain periods are prescribed, before which a child shall not be deemed guilty of certain crimes. For instance, a male child is supposed not capable of committing a rape before the age of 14. There are, however, cases on record of children arriving at puberty at a very early age. Some cases are recorded of boys attaining it at the age of 4 and even younger. But these cases are rare. Others, again, arrive at that period in from 8 to 10 years. A case occurred at Paris, where a woman attributed her pregnancy to a boy 10 years old. It may be a subject of consideration whether the powers of the individual should not be taken into account, rather than the age.

The subject of age seems particularly to have attracted the attention of the ancients, who divided the life of man into several climacterics or periods. They supposed, as I have stated above, that the human body underwent a radical change once in seven years; that is, by the constant absorption going on in the body, every part was completely taken up in seven years, and carried off by the absorbents, and a new deposition of animal matter succeeded to supply the loss or want which it then sustained. Tullius, King of Rome, divided age into infancy (which was under 7 years); childhood, from 7 to 14; youth, from 14 to 21; manhood, from 21 to 46; old age, from 46 to 70; and from that time till death he called decrepitude. Many of the moderns have adopted this division, though most of them vary. After the age of 60, in England and in some parts of the United States, men are not obliged to serve on juries. The age of 63 is the first grand climacteric, and is supposed to be a critical age. It has been ably described by Sir Henry Halford, with its incidental climacteric disease, some account of which may be found in Good's Study of Medicine, and in Copland's Medical Dictionary. This disease occurs between the ages of 50 and 75, but more frequently about the age of 63. After 65, men *usually* cease to procreate, but there are some exceptions. *Seventy years* is the scriptural limit of life, though there are, especially of late, many exceptions, and it is supposed that the average of old age has increased. Only 1 in 15,000, however, reaches 100 years; nor is the age of 81 (the second grand climacteric) often attained.

Infancy, in the acceptation above laid down, may comprehend childhood and youth, though many think that youth extends to the age of 28. The period allowed to manhood, undoubtedly, in this climate, is by far too short. The mental faculties are often as bright at 70, the time at which decrepitude is said to take place, as at any period of life; and, perhaps, the judgment is not more matured and perfect at any period, provided a man enjoys good health, than at 60. After all that has been said upon the subject,

it seems that no other division of age is necessary than that which is naturally suggested in the rise and decline of life.

I have but few statistics to prove the correctness of my belief that there are no more deaths in the supposed climacteric years than in any others, and at present can only give those of the town of Deerfield, in Massachusetts, accurately kept for a period of sixty-six years. These statistics commence in 1787, and terminate in 1852. The whole number of deaths there in that time was 1531. Of these, 216 were under 1 year, and 16 were between 90 and 100 years of age. I give a little table from these deaths of those who have died during their climacteric years, and the years preceding and succeeding them:—

At seven years,	11	At six years,	10	At eight years,	5
fourteen	5	thirteen	7	fifteen	5
twenty-one	20	twenty	9	twenty-two	14
twenty-eight	7	twenty-seven	10	twenty-nine	11
thirty-five	9	thirty four	8	thirty-six	8
forty-two	9	forty-one	6	forty-three	5
forty-nine	3	forty-eight	10	fifty	17
fifty-six	5	fifty-five	7	fifty-seven	9
sixty-three	3	sixty-two	10	sixty-four	12
seventy	23	sixty-nine	12	sevent-one	11
seventy-seven	15	seventy-six	16	seventy-eight	17
eighty-one	6	eighty	18	eighty-two	10
Total,	116		123		124

The above table shows that the climacteric years in Deerfield have been less fatal than those immediately preceding and succeeding them, and this I think will hold equally true in other places. So there seems to be but little fear of special danger from these supposed fatal years.—[*Boston Med. and Surg. Journal.*

Case of Resection of the Right Elbow Joint for the relief of Caries and Anchylosis of the Joint; cured, with considerable motion at the Elbow. By Henry H. Smith, M. D., Consulting Surgeon to the Philadelphia Hospital, Blockley.

Terence ——, aged 16 years, entered the Philadelphia Hospital, Feb. 23d, 1854, in consequence of caries of the right elbow and anchylosis of the joint, consequent on a fall.

The disorder having existed for 18 months, and the arm been allowed to become anchylosed in the straight position, he was sent as a pauper to the Alms House and thence to the Hospital. After being in the house about eight months, he was presented to me at the commencement of my term of service in October. At this time, he was pale, anæmic and enfeebled by long continued disease and suffering, and exhibited symptoms of hectic fever; the elbow-joint was very much swollen, and the skin inflamed and thickened round the bend of the elbow, several ulcerated spots and fistulous orifices existing both on the front and back of the arm. On introducing a probe into two or three of these orifices,

the bones were readily felt in a carious condition; there was also perfect inability to move the hand in pronation or supination, the least attempt at bending the elbow or pronating the hand causing him severe pain. As his right arm was thus rendered useless, and there was every prospect of his either dying of hectic fever or becoming a pauper for life, I decided on attempting to save the limb by resecting the diseased joint. Accordingly, on the 11th of October, 1854, after an appropriate preliminary treatment, I operated as follows, before the medical class in attendance on the practice of the house.

Operation. The boy being fully etherized by a mixture of chloroform 1 part, ether 3 parts by weight, was laid on his belly with his face inclined to the side of the table, and a stout, round pillow placed on the front of the elbow as a support to the portion to be operated on, as well as with the view of favoring the flexion of the fore-arm, after the section of the olecranon process.

The arm being thus steadied, an H incision was made over the joint on its posterior face; the flaps turned up, the ulna nerve dissected out of its trochlea, and held on the front side of the internal condyle, and the artery which accompanied it compressed at a point where it was wounded. Martin's* circular saw being then applied to the shaft of the ulna, the olecranon process was soon removed, and the whole joint being thus laid open and found to be diseased, both the condyles of the humerus, as well as the epitrochlea, were sawed off by the same saw. The head of the radius being also diseased, it was excised from the neck of the bone by means of large and strong bone-nippers. So little hemorrhage ensued on the operation that no ligatures were applied. The flaps were then loosely united by sutures, supported by a light bandage, and the boy placed in bed with the arm supported on a pillow in the semi-flexed position, the whole elbow being covered by cloths, wrung out of tepid water. At 8 o'clock, P. M., his pulse was 90, and, as he was suffering, 60 drops of laudanum were given to allay the pain.

Oct. 12th. Slept well, better than for many weeks; suffers but little. Ordered chicken-broth and anodyne pro re nata.

Oct. 14th. Removed dressing; suppuration commenced; ordered a light bandage to the part; omit water dressing; tinct. cinchonæ compos. f ʒiv. per diem; chicken for dinner.

Oct. 16th. Dressed arm and increased the flexion slightly.

Oct. 18th. Applied an obtuse angular splint to the front of the arm; ordered to sit up.

Oct. 20th. Has his clothing on.

Oct. 24th. Applied a splint nearly of a right angle.

After this date, the wound was dressed daily, the agle of the splint being gradually changed to a right angle, and then to one which semi-flexed the arm.

[* This saw may be found figured in Smith's Operative Surgery, second edition, plate 5, fig. 1, vol. I.—Editor.]

Dec. 5th. Terence is now able to do without the splint, and has considerable motion at the joint, the wound being healed.

Jan. 15th. Terence can now move his elbow, so that his hand will traverse an arc of 40 degrees, and can pronate and supinate the hand quite well.

Remarks. The advantages of the operation of resection in this case are so apparent as not to require much argument, the saving of a right arm in one dependant on his daily labor for his support, being sufficient evidence of its value as a means of treatment in similar cases.

As a class, few operations are more strikingly illustrative of the progress of conservative surgery than those of resections, yet the number of instances reported in the United States of its application to the upper extremity are by no means commensurate with the cases which might have thus escaped amputation. After a careful examination of a very considerable number of American medical periodicals, I find only the following:—one by Dr. Thos. Harris, of Philadelphia, in 1836; one by Dr. Gurdon Buck, Jr., of New York, in 1841, another in 1843, and a third one in 1846; and one by Dr. J. Pancoast in 1842. These cases, with the present one, making only six instances in which this operation has been published. In every case no serious symptoms supervened on the operation, and the patient was relieved of the exhaustion and suffering attendant on the disease, besides obtaining a comparatively useful limb.

The entire head of the humerus was resected by Dr. Hunt, of Washington city, in 1818, and a large portion of the same bone (its head) was removed by Dr. Pinckney, of the Navy, in 1846. When we compare this limited number of operations with the numerous cases of diseased joints that have required it, we must admit that resections of the bones of the upper extremity have not received the attention that the benefits conferred by the operation might naturally lead us to anticipate, and it is with a view of calling professional notice to this useful class of operations that the present case has now been reported.—[*Medical Examiner.*

Remarks on some Cases of Fracture, in which the Diagnostic Signs of that Lesion were absent. By David P. Smith, A. M., M. D., of Springfield, Massachusetts.

Having met with several cases of fracture which presented unusual difficulties in their diagnosis, and being convinced that similar cases are too often considered to be mere sprains or bruises, I take the liberty of laying them before your readers.

Case I.—May 8th, 1854, I was called to see Mrs. J. D. G., who had stepped upon a rolling stone, and fallen on the sidewalk. She was unable to walk, and was carried home, where I saw her about one half hour after the accident. At her urgent solicitation, I gave her æther, and proceeded to examine her limb from the knee

down, expecting to find a fracture. I could discover none after the most minute examination. I am confident that I made a thorough examination, for I was so persuaded by the intense pain, referred to the shaft of the tibia, that there was a fracture, that it was some time before I would give over seeking for one. I placed the leg in a copper half-boot splint, after bandaging it carefully, and left it for 2 or 3 days. I then called, and finding the leg still painful, I examined again, and plainly made out a fracture of the tibia at the junction of the middle with the lower third.

Case II.—While talking with a medical gentleman of this place about the foregoing case, he told me that he had called my late father in consultation to a similar case, and that they were both of them unable to discover any fracture. After a few days had elapsed, the same gentleman easily found a fracture of the tibia.

Case III.—Sometime last August, a gentleman from out of town called upon me walking with crutches. He reported that he had fallen about three feet, alighting on his heels, and that ever since, he experienced great pain in one of his limbs whenever he bore weight upon it. A physician had seen him, and told him that he could detect no fracture. I spent a long time in examining his ankle, and after at least an half an hour, I was enabled to produce crepitus and diagnose a fracture of the external malleolus.

Case IV.—A physician from Enfield in this State, called upon me a few days since, and, in the course of our conversation, asked me if I ever found the usual diagnostic marks of fracture to fail in any case. He said he had lately had a fracture of the tibia in which he could by no means produce crepitus, within 24 hours after the accident.

One or two cases of fractures near and into joints which presented unusual difficulties in diagnosis, I forbear mentioning, because, as they are always difficult to be found out, any account of them would not further my present purpose, which is, to show that ordinary fractures in the shaft of bones may want the usual symptoms of this injury, and so greatly embarrass, not only the young, but the more advanced practitioner. I think, indeed I am sure, that many of these obscure fractures are considered to be and treated as sprains. I am particular in calling the attention of the profession to these cases, because I think that, if we would be more careful, and would not grudge an hour's careful examination of these obscure cases, we should be less troubled by "natural bone-setters" and should see fewer of those so called bruises and sprains which require months for their recovery.

It is agreed by all authorities, that all the signs of fracture are equivocal except crepitus, and even that is liable to be confounded with the grating produced by a thickening or partial absence of the synovia in some dislocations. What then I wish to impress upon the reader is this, that he must not suppose that fractures can in all cases be detected by one, even if it is a *careful* examination. Let him, if he is not perfectly satisfied of the nature of the

injury, examine again and again. Let him remember that crepitus is the only sure diagnostic mark between bruise or sprain and fracture, and that this light *often* fails us. I think it is best to treat any severe sprain as a fracture; because, if it is indeed only a sprain, the perfect rest induced by the splints will cure it quicker than any other means: well, again, if it is found by further examination to be a fracture, we have employed the means we ought from the outset. I lately had a case of fracture of the internal condyle of the humerus in a child, which, apprehensive of a fracture, I examined three or four times without finding what I expected. Being confident that there was something more than a bruise, I requested the parent of the boy to allow another examination. After one full half hour I was enabled to detect one. I have no suggestions to offer as to the proper method of examining fractures; because each individual case requires a peculiar manipulation.

I know that by the publication of these cases I have laid myself open to the charge of a want of a *tactus eruditus;* but I cannot but think that, if surgeons would examine their cases more carefully, they would treat more fractures and fewer bruises and sprains than they now do. Fergusson, in the last edition of his practical surgery, in speaking of a leg which he examined after death, says "maceration caused the fragments to separate, but during life there was no such displacement, and the annoyance did not seem greater than might have been expected from a violent sprain." The probable cause or causes of the obscurity of these fractures, I will not now stop to comment upon; it is merely *the fact* that I wish to establish.—[*Virginia Med. and Surg. Jour.*

Placenta Prævia. By M. Depaul.

At a recent meeting of the Medico-Chirurgical Society of Paris, M. Depaul presented a paper upon uterine hæmorrhage due to the attachment of the placenta upon the inferior segment of the uterus. After showing that in such cases the cause of the hæmorrhage was a defect in the comparative development of this part of the uterus and the placenta, the author asks what the accoucheur must do to remedy such a condition of things? That will depend upon the frequency of the hæmorrhages, their amount, the state of the fœtus, the life of which may be compromised, and lastly, upon the existence or absence of uterine contractions. There are many indications which the practitioner will have to consider before adopting any course. He may employ only general means, such as bloodletting, the use of ergot, the tampon; and, as a last resource, he may perforate the membranes, in order to obtain prompt delivery either by version, or by applying the forceps, according to the presentation of the child. But when the placenta is implanted over the very opening of the neck, I believe it best, says M. Depaul, to apply the tampon, to let the labour advance, and to try to loosen

the placenta laterally, in order to be able to rupture the membranes. I am decidedly opposed, adds he, to tearing the placenta from side to side, in order to reach the child; such a practice is attended with too many dangers. After delivery in such cases, it must not be forgotten that the danger is not over; the hæmorrhage may continue and prove fatal, kept up as it is by the peculiar vascularity of the inferior segment of the organ, and by the slow tendency it has to contract during the first days after parturition. This contraction ought to be induced by every means in use, the best of which is unquestionably ergot.—[*L'Union Médicale. Virginia Med. and Surg. Journal.*

On Compression of the Arteries for the cure of Neuralgia. By M. ALLIER.

An individual, aged 48, of nervous temperament, experienced, during convalescence from a severe malady, the return of a neuralgia of the orbito-frontal nerve, to which he had been subject for some time. It resisted the employment of the usual measures. After seven days of severe pain, M. Allier proceeded to compress the carotid artery of that side, continuing the treatment from one quarter of an hour to another during the whole morning, intervals of five minutes only being allowed. A state of somnolence supervened, during which the pains disappeared; but they soon afterwards attacked, suddenly and with violence, the dorsum of the penis, extending from the pubis to the glans. Pressure upon the abdominal aorta caused their gradual abatement. This case is interesting in a double point of view—first, as a rare instance of neuralgia of the superior branch of the pudic nerve supervening upon a similar affection of the orbito-frontal nerve; and, in the second place, as illustrating the efficacy of compression in causing the cessation of neuralgic pains.—[*Gaz. Méd. de Paris. Virginia Med. and Surg. Jour.*

Gum Mezquite as a substitute for Gum Arabic. By GEORGE G. SHUMARD, M. D., Forth Smith, Arkansas.

The suggestion of Dr. Shumard, (which we notice in the Boston Medical and Surgical Journal,) that the gum from the mezquite tree is almost analogous to, and might be easily substituted for, the gum acacia of the pharmacopœia, is worthy of notice. The inexhaustible quantities which might be obtained from Texas, New Mexico, and the adjacent country, would prove a source of revenue as well as affording employment to the tribes of Indians now wandering over those plains, who would be glad to collect this substance for a very small compensation. Dr. Shumard describes the character of this growth, and the mode of obtaining the gum, as follows:

The mezquite tree, from which the gum is obtained, is by far the most abundant tree of the plains, covering thousands of miles of surface, and always flourishes most luxuriantly in elevated and dry regions. The gum exudes spontaneously in a semi-fiuid state from the bark of the trunk and branches, and soon hardens by exposure to the atmosphere, forming more or less rounded and variously colored masses, weighing each from a few grains to several ounces. These soon bleach and whiten upon exposure to the light of the sun, finally becoming nearly colorless, semi-transparent, and often filled with minute fissures. Specimens collected from the trunks of the trees were generally found to be less pure and more highly colored than when obtained from the branches. The gum may be collected during the months of July, August and September, but the most favorable period for that purpose is in the latter part of August, when it may be obtained in the greatest abundance and with but little trouble. The quantity yielded by each tree varies from one ounce to three pounds, but incisions made in the bark not only greatly facilitate its exudations, but cause the tree to yield a much greater amount. As it is, a good collector would probably he able to gather from ten to twenty pounds in a day; were incisions resorted to, probably double the amount might be obtained.—[*Virginia Med. and Surg. Jour.*

EDITORIAL AND MISCELLANEOUS.

BIBLIOGRAPHICAL.

The Microscopic Anatomy of the Human Body in health and disease. Illustrated with numerous drawings in color. By Arthur Hill Hassall, M. B., &c., &c.—with additions to the Text and Plates, and an Introduction, containing instructions in Microscopic Manipulations, by Henry Vanarsdale, M. D. 2 vols. New-York: Samuel S. and William Wood. 1855. 8vo. (For sale by T. Richards & Son.)

We congratulate the Profession upon the opportunity now afforded by the liberal and enterprising house of S. S. & W. Wood, of New-York, of procuring Hassall's great work. It is magnificently published, and vended at a reasonable price. It is the only complete work of the kind in the English language, and reflects high credit upon its learned and indefatigable author. This edition is, moreover, materially enhanced by the additions of the American Editor. The second volume is an atlas of plates beautifully drawn from nature. This work ought to be in the hands of every reading physician.

The Principles and Practice of Obstetric Medicine and Surgery, in reference to the process of Parturition—with 64 Plates and numerous Wood-cuts. By Francis H. Ramsbotham, M. D., &c., &c. A new American edition,

revised by the author, with notes and additions, by Wm. V. Keating, M. D., A. M., &c., &c. Philadelphia: Blanchard & Lea. 1855. Large 8vo., pp. 650. (For sale by McKinne & Hall.)

This work has been so long and favorably known that it can need no commendation at our hands. It is sufficient for us to say that this edition is gotten up in splendid style, and that it is justly entitled to extensive patronage.

The Principles of Physiology; designed for the use of schools, academies, colleges, and the general reader. Comprising a familiar explanation of the structure and functions of the organs of Man, illustrated by comparative reference to those of the inferior animals. Also, an Essay on the Preservation of Health, with 14 *quarto plates, and over* 80 *engravings on wood, making in all nearly* 200 *figures.* By J. C. Comstock and B. N. Comings, M. D. New-York: S. S. & W. Wood. 1855. (For sale by T. Richards & Son.)

This work is remarkably well adapted to the use of schools for either sex, being beautifully illustrated, and written in unexceptionable style. If generally introduced, it is calculated to do much good, as every one ought to have some knowledge of his own structure and functions.

The Dublin Dissector or Manual of Anatomy; comprising a description of the bones, muscles, vessels, nerves, and viscera; also, the relative anatomy of the different regions of the human body, together with the elements of Pathology. By Robert Harrison, A. M., M. B., T. D. C., &c., &c., 3d American from the 5th enlarged Dublin edition—with additions by Robert Watts, jr., M. D., Professor, &c., &c. New-York: Samuel S. and Wm. Wood. 1854. 12mo., pp. 542. (For sale by T. Richards & Son.)

A Text-Book of Practical Anatomy. By Robert Harrison, M. D., M. R. J. A., &c., &c., with additions by an American physician—with numerous illustrations. 2d edition. New-York: S. S. & W. Wood. 1855. 8vo., pp. 720. (For sale by T. Richards & Son.)

We have here an old friend of the practical anatomist—who now presents himself to us both under his original title of "Dublin Dissector," and under that of "A Text-Book of Practical Anatomy." If he has improved, as he undoubtedly has, without a change of name, what may we not expect of him when he has thought it necessary to adopt a new cognomen. The truth is, that we now find our faithful companion so much enlarged and modernized that we scarcely recognize him; and although it may be true in some cases that—

> Loveliness needs not the foreign aid of ornament,
> But is, when unadorned, adorned the most—

this is not the fact with regard to such characters as Dissectors. His livery of fine engravings sets him off admirably, and adds wonderfully to his accessibility; for like all of his clan, it was no easy matter to get ac-

quainted with him in days gone by. We cheerfully commend him, adorned or unadorned, as an excellent guide.

What to observe at the Bed-side and after Death in Medical Cases. Published under the authority of the London Medical Society of Observation. 2d American from the 2d and enlarged London edition. Philadelphia: Blanchard & Lea. 1855. 8vo., pp. 230. (For sale by T. Richards & Son.)

We have already had occasion to notice this work. Its extensive sale shows that it has met with favor, and its present improved form can only add to its popularity.

Essays on Infant Therapeutics: to which are added observations on Ergot; a history of the origin of the use of Mercury in inflammatory complaints; together with the statistics of the deaths from poisoning in New-York in the years 1841–2–3. By John B. Beck, M. D., Professor, &c., &c. 2d edition, enlarged and revised. New-York: S. S. & Wm. Wood. 1855. 12mo., pp. 170. (For sale by T. Richards & Son.)

These Essays of the lamented Professor Beck, especially those upon the effects of opium, emetics, mercury, blisters, and bloodletting on children, are very valuable contributions to practical medicine, and ought to be studied carefully by young physicians before they undertake to medicate childhood upon principles applicable to adults.

We are indebted to the authors for quite a pile of pamphlets, among which are:—The twelfth annual Report of the Managers of the State Lunatic Asylum of New-York——The 19th annual Report of the Managers of the New-York institution for the Blind——The Report of the Pennsylvania Hospital for the Insane, for the year 1854——The Report of the Trustees and Superintendent of the Butler Hospital for the Insane, presented to the Corporation at their annual meeting, January, 1855, Providence, R. I.——On Injection of the Bronchial tubes and Tubercular cavities of the Lungs, by Horace Green, M. D., &c., &c. New-York. (We expect to refer again to this.)——The Transactions of the New Hampshire Medical Society, 64th anniversary, Concord——Transactions of the Illinois State Medical Society for 1854, Chicago——Oration, delivered before the Physico-Medical Society of New Orleans, at their anniversary meeting in December, 1854, by A. Mercier, M. D. A very handsome address——Table of Urinary Deposits, with their microscopical and chemical Tests; for clinical examinations, by John King, M. D.. Cincinnati. An excellent Tableau, which would, however, be more useful if printed in a more convenient form for preservation.

Cases of Inflammation and Ulceration of the Cervix Uteri. By James M. Green, M. D., of Macon, Ga.

Under this modest title the author has furnished us an exceedingly valuable clinical report. As it is not easy to analyse such papers, we subjoin the author's plan of treatment, the result of considerable experience.

"*Treatment.*—There is no treatment whereby confirmed ulceration of the cervix uteri can be cured, except the local application of cauterizing agents to the diseased parts.

"The most generally useful of these agents is the nitrate of silver, which of itself is sufficient for the cure of many cases. In a large number, however, its alterative effect is not great enough, and we have to substitute the acid nitrate of mercury. A good general rule is to apply the solid nitrate to the ulcerated surface every four to seven days, as long as it seems to be healing. When the healing process stops then make one application of the acid nitrate of mercury, and notice the result; if favorable, return to the weekly touchings with nitrate of silver, until a similar necessity should arise. In cases of a little greater obstinacy make alternate weekly applications of the two agents.

"In some cases the eschar is thrown off sooner than in others, and an earlier re-application of the caustic is consequently required. Again, in some a longer interval is required for the production of the best effects. When the ulceration ceases healing under the periodical cauterizations, it is advisable to stop treatment for two or three weeks.

"In old chronic cases of indurated hypertrophy, the disease will occasionally be found to resist the influence of those milder remedies. In these we shall be obliged cautiously to resort to the caustic, lime or soda. The resolutive effect of the potential and actual cauteries, in removing chronic uterine indurations that bid defiance to all other methods of treatment, is among the most brilliant results of Recamier's discovery.

"The only mode of using these remedies safely is through a speculum. Among the best and most convenient forms of this instrument is the common conical glass speculum, covered with amalgam and painted black. If made tolerably thick there is no danger of their breaking in the vagina, and they expose the parts very perfectly to view.

"Ulceration of the cervix uteri may be treated with more certainty and success during the pregnant state, from a disposition in nature to cure the disease at this time and remove the inflammatory hardening, thus preparing the way for delivery.

"During pregnancy, where abortion or miscarriage is threatened, we should not wait a moment for the commencement of treatment, but apply our caustics immediately to the whole ulcerated surface, clear up to the internal coarctation. Nitrate of silver is the great sedative of chronic inflammation and irritations of the mucous membrane, and prompt treatment the only thing to prevent the irritation extending through the canal to the uterine body, and provoking the premature expulsion of its contents.

"In pregnancy these cases will bear stronger applications, and more decided treatment than in the non-pregnant state.

"In treating cases of ulcerated cervix with hypertrophy, we should never cease treatment until every trace of induration is removed.

"One or two cauterizations frequently produce a very marked improvement in the feelings of the patient, when little apparent change has taken place in the ulcer itself. Though, of course, some vital changes must have occurred in the condition modifying the deceased emanations.

"Sometimes during the progress of a case the anterior lip, which may have been more inflamed and ulcerated than the posterior, suddenly heals up, and the posterior lip becomes swollen and inflamed, and vice versa.

"Sometimes when the case is apparently getting well under treatment, the ulcer will suddenly assume a redder hue and more irritable look, and

increase in size, with a corresponding increase of the surrounding tumefaction and all the dependant irritations. On careful examination, this may, at times, be traced to the irritation of rough treatment, or too much exercise.

"Some writers have repudiated the use of vaginal injections, but their efficient use in washing away the impure collections of acrid secretions, in the upper part of the canal, must have a healing and healthy influence. The free contact of cold water with the inflamed and irritable cervix and vaginal mucous membrane, must exercise a similar influence.

"The writer has not found cases of ulceration associated with any ordinary degree of flexion, backwards or forwards, or prolapsus, to require any other treatment than that adapted to cure the cervical disease, and to restore the contractile power and strength of the vaginal tube.

"In some instances, where the general health and the functional disturbances did not give way from the removal of the local disease, excellent results have been realized from the use of Hyd. Potass. and Sarsaparilla Syrup, and still more from that admirable eutrophic Cod Liver Oil.

"In irritable and inflamed conditions of the vagina, which frequently accompany cervical inflammations, laudanum and morphine injections, allowed to remain some time in the canal, are very useful.

"In cases attended by much pelvic suffering, a laudanum enema, administered every night, has the best effect in relieving the local suffering, as well as the pains in the loins and other parts excited by it.

"Confinement to bed should only be ordered when the ulcer is in a very irritable condition, and motion seems to aggravate the disease. Continuance in the recumbent posture rapidly impairs the appetite and the general strength.

"Where the urine is red, scanty and loaded with red deposits, great improvement will result from the use of alkaline remedies (an excellent prescription is Carb. Potass. gr. 20; Calcined Magnes. gr. 10; Pulverized Rhubarb gr. 5, every night,) followed, after some weeks' use, by some of the terebinthinate remedies.

"Where the neuralgic pains continue lurking about the loins and pelvic viscera after the ulceration is cured, they may frequently be entirely removed by one or more decided vesications to the loins.

"When the urinary deposits are white and alkaline, the patient will be benefitted by the use of the acid alteratives, nitric or muriatic acids in proper doses.

"When the stomach is very much impaired in tone, and deranged from the long continuance of the functional irritation, it will be benefitted by one or more blisters to the epigastrium.

"In closing these remarks upon inflammation and ulceration of the neck of the womb, the writer thinks proper to observe that although the treatment necessary for the removal of these grave lesions does not require any peculiar and inscrutable *tactus eruditus*, yet it does require a great deal of care and caution, and some experience in the treatment of uterine disease. The application of strong re-agents to this delicate and important part, necessarily involves delicacy of touch and discretion, particularly the use of the potential caustics, for the removal of chronic indurations. The latter should not be attempted by the tyro in uterine disease."

Report of the Sanitary Commission of New Orleans on the Epidemic Yellow Fever of 1853. Published by authority of the City Council of New Orleans. 1854. 8vo. pp. 542.

We are indebted to a member of the "commission" for this interesting volume. The committee consisted of Hon. A. D. Crossman, Mayor, and of Doctors E. H. Barton, A. F. Axson, S. D. McNeil, T. C. Simonds, and T. L. Riddell. The duties assigned the committee were:

"1st.—To inquire into the origin and mode of transmission or propagation of the late epidemic yellow fever.

"2d.—To inquire into the subject of sewerage and common drains, their adaptability to the situation of our city, and their influence on health.

"3d.—To inquire into the subject of quarantine, its uses and applicability here, and its influence in protecting the city from epidemic and contagious maladies, and

"4th.—To make a thorough examination into the sanitary condition of the city, into all causes influencing it, in present and previous years, and to suggest the requisite sanitary measures to remove or prevent them and into the causes of yellow fever in ports and other localities having intercourse with New Orleans."

These sections were distributed among the several members of the committee—the 1st to Drs. Axson and McNeil; the 2d to Dr. Riddell; the 3d to Dr. Simonds, and the 4th to Dr. Barton. The volume before us contains the separate Reports of each of these sub-committees, with a large mass of medical testimony obtained from every important point of the yellow fever zone of this and other countries. Although these reports are not printed in the order indicated above, we shall adhere to this for the purpose of perspicuity.

The report of Drs. Axson and McNeil on the origin and spread of the epidemic is concise and ably drawn up. Our limits allow us only to note that they repudiate the idea of contagion, and to furnish their concluding remarks:

"Looking, then, with singleness of purpose only, at the late epidemic and what we have been able to garner up of its passing history, we feel warranted in stating—

That it has not been derived from abroad, but is of spontaneous origin:

That there existed here, as attested by our records, very peculiar meteorological conditions, known, by general experience, to be capable of producing, in co-operation with local causes, fatal and malignant forms of fever:

That these conditions were present in an exaggerated degree, and impressed upon the prevalent type of disease susceptibilities and habits assimilating it to another and distinct form of fever:

That this showed in all those localities within the range of the meteorological state or influence, an infectiousness not necessary to, or characteristic of the fever, but purely casual and incidental, the result of physical causes, and which it loses as soon as those causes are changed or disappear."

Dr. Riddell's report on the subjects of city sewerage is an exceedingly interesting epitome of the plans best adapted to the purpose of carrying off

the filth of cities, and is characteristic of the learned Doctor's precision and skill,

The report of Dr. Simonds on quarantine is not as complete as he would have desired it, in consequence of an affection of his eyes which limited his labors. The Doctor is not very explicit on the subject of contagion, but we fully concur in the following remarks:

"Whatever may be thought of the contagiousness or of the transportability of yellow fever in general, or as it has prevailed here in other years and in other places at various times, it would appear to admit of no doubt that the epidemic of 1853 was carried by the regular course of travel to the interior. Its progress was steadily directed to the points of most direct commercial intercourse throughout the Southwest; and it appears, moreover, that having once obtained a foothold in any locality, this served as a new focus from which it was still further diffused. It does not appear to have followed any of the known laws of the diffusion of gases, nor to have exhibited any other law of diffusion than that above indicated. Like a skillful general in the invasion of the territory of an enemy it took possession, *seriatim*, of the most important and prominent points which should serve as a basis for future operations."

And concludes with the following recommendation, which we would like to see adopted by our city authorities;

"The Commission therefore recommend that the Common Council memorialize the Legislature, requesting that full powers to establish, govern, supervise, and direct a quarantine for the port of New Orleans, including therein all the routes, road passes, bayous and railroads in any and every direction, be conferred on the corporate authorities of the city, and that an appropriation of —— hundred and ——— thousand dollars be set apart, subject to the order of the proper authorities under proper restrictions to defray the expenses thereof."

The Report upon the sanitary condition of New Orleans, by Dr. Barton, by far the most voluminous, occupying 250 pages, embodies an immense store of interesting matter, illustrated by tables, charts, &c. It is indicative of great industry as well as familiarity with the subject on the part of the learned reporter, and must take place among the most valuable documents of the kind. Although much of this paper is devoted to considerations still within the domain of theory, and upon which there must consequently be diversity of opinion, it is nevertheless but fair to the author to acknowledge that his arguments are generally sustained by the facts adduced. Others might, perhaps, arrive at different conclusions by invoking another class of facts. The reporter, for example, dwells at length upon the concurrence of epidemics of yellow fever with up-turnings or excavations of the earth in or about infected cities; but many instances may be cited in which such disturbances of the earth being made, have not occasioned yellow fever in places subject to this disease, as well as others in which the disease has prevailed *without* exposures of this kind. The same may be said with regard to accumulations of filth. During the whole period of the immense

excavations necessary in the completion of the Augusta Canal, when the animal and vegetable matters, which had accumulated to a great depth for ages in our Beaver Dam Swamp, were thrown up and exposed to the action of the summer sun, this city was never more healthy. The year in which our gas-pipes were laid throughout the city, was equally healthy, and the city was never more cleanly than in the summer of 1854 when the epidemic made its appearance. Very few gas-pipes were laid down that season.

This report contains a chart showing the mortuary statistics of New Orleans for the last fifty years, from which it appears that the annual mortality during that time was 59.63 per 1000 of the population; whereas the average annual mortality of the six or eight principal cities of the Union is a little upwards of 2½ per cent. For the last six years preceding 1853 it has averaged in New Orleans 6¾ per cent. The table No. 2 "showing the life cost of acclimation or liabilities to yellow fever from nativity, as exhibited by the epidemic of 1853 in New Orleans" is very striking. We learn from it that the ratio of mortality per thousand was with natives of Louisiana (including New Orleans) 3.58; of other proximate Southern States 13.22; of the Northern States 32.83; of the Western States 44.23; and of British America 50.24. Among foreigners the *cost* was much greater—thus: with the Irish 204.97; those from Northern Europe 163.26; from Germany 132.01; from Holland and Belgium 328.94; from mountainous Europe 220.08; from Southern Europe 22.06. From these data it would appear that Southern nativity, both in America and Europe, is singularly protective or antidotal. This is the converse of what obtains with regard to the ordinary fevers of this section of country, to which none are so liable as natives. We are aware that in this announcement, we are in conflict with both tradition and written authority; but it is the result of long observation and of deductions from the mortuary statistics of this city (Augusta). We have long since stated these views in the pages of this Journal,* and we repeat that they are correct so far as relates to this region of Georgia. Upon the plantations in our sickly counties, the negroes, who are

* In the Bills of Mortality of Augusta for 1833–34–35 and '36, published in the Southern Medical and Surgical Journal, April 1837, p. 663, we find a table showing the place of nativity of the whites who died of bilious fever during those years, from which it appears that of the natives of States north of the Potomac, 7 died.

" " "	Europe,	10 = 17.
" " "	Georgia,	28
" " "	other Southern States	18 = 46.

Now if to these 46 an equal number of negroes, who are all natives of the South, be added, the result will be very remarkable. It should be observed that at that time our white population was about equally divided between Northerners and Southerners, and also between whites and blacks. During these four years, there died 413 whites and 468 blacks out of a population of about 7,500, making the annual average mortality at that time, 1 in 34.10. The average has become much more favorable since the improvements in the treatment of our autumnal fevers; about 2½ per cent.

mostly natives, suffer attacks of fever more or less violent almost every autumn. Another striking point of difference between our fevers and yellow fever is that one attack, so far from establishing an immunity from subsequent ones, renders the subject infinitely more liable to them.

We must here beg leave to differ from the Reporter with regard to his 7th proposition (inserted below). We cannot admit from the mere fact that other forms of fever prevail when yellow fever does not, that it is demonstrated that they owe their origin to the same causes as yellow fever, operating with less intensity. Might we not draw the same inference from the occurrence of any other disease during the absence of yellow fever? But it is urged that our periodic fevers are *convertible* into yellow fever. If by this it be meant that by merely increasing in violence or intensity the bilious (so called) fever becomes yellow fever, we cannot but regard this a serious error. If a man be affected with phthisis pulmonalis, with pneumonia, with diarrhœa or with rheumatism and that he die of black vomit, will it be insisted that the disease with which he was first attacked has been *converted* into yellow fever? or is the *convertibility* to be confined to bilious fever alone because this disease presents *some similarity* to yellow fever in its symptomatology? Believing firmly, as we do, that yellow fever is a distinct disease; that it recognizes a distinct cause (or causes, if this be preferred); that this cause, unlike that of our periodic fevers, may be carried about in ships, steamers and closed rail road cars from place to place, spreading its infection along thoroughfares; that the treatment known to be specific in periodic fevers is of little value in yellow fever; that one attack of yellow fever exempts from subsequent ones; that persons may become so acclimated as to be protected from yellow fever, but never so from our periodic fevers; that negroes are comparatively exempt from yellow fever, although as liable to bilious fever as whites; we cannot admit their *convertibility* in the sense in which this term is generally used. We are willing to grant that an attack of "bilious" fever, or of sundry other affections, may predispose the patient to the inroads of the yellow fever, which he might otherwise have escaped.

We have extended this paper so much beyond our original design that we have space now only for the Reporter's résumé.

"1st. That it is the cause of the high price of everything, and the direct means of retarding her progress to prosperity, and which will continue to exist until effective measures are taken to remove it.

2d. That the direct and *inevitable* change of *climate alone*, is not the sole cause of the mortality of immigrants, but the union of the climate with the terrene conditions under *different circumstances*, were the efficient agents in the destructive influence on each class of people as pointed out according to nativity; that man cannot become acclimated to the second cause, or terrene (filth, &c.) any where, and that the acclimation to our first cause (or atmospheric) would be trifling, if the conditions constituting it, were so modified, as was clearly shown to be, in our power.

3d. We have endeavored to prove what were the CONSTITUENTS of the epidemic yellow fever of 1853, that they consisted of certain atmospheric and terrene combinations; that these causes, so far as we had the means of ascertaining, were confined to the limits of the fever district; that it began with these causes and ended with them, throughout the limits of the epidemic region, and that when these ceased, so terminated its influence on man.

4th. That one of these causes, (the atmospheric,) is more or less present here every summer, and that when the second (or terrene) exists in sufficient amount, an *epidemic* is the certain result, so far as near sixty year's experience will go to prove it; that this terrene condition is mainly composed of extensive disturbances, or upturning and exposure of the original soil of the country; that without this there has been no such *epidemic*, although, between the occurrence of some of them, long periods have elapsed; and that its ravages or malignity appears to have been pretty much in proportion to the extent of that disturbance.

5th. That for the existence of an *epidemic*, a wide pervading atmospheric cause being one of the essential elements, an *epidemic disease cannot be imported*, and that as a contagious disease cannot depend upon a *general cause* for its existence, but must derive its qualities from a specific one; epidemic yellow fever is consequently not a contagious disease.

6th. That to constitute an *endemic yellow fever*, the difference of which from an epidemic was fully pointed out, that the *apparent contagion* was only the extension of the epidemic principle, a lesser degree of the same, or what was believed to be equivalent, (filth of all kinds, and decomposing materials) with a lesser degree or intensity of the first or atmospheric constituent, were essential.

7th. That when these causes did not exist in a sufficiently high degree to produce *yellow fever*, intermittent, remittent bilious, or other periodic fevers were the result, demonstrating by the clearest analogy that they proceeded from the same cause, and that they differed only in degree and intensity, a major amount of the very same materials being required to produce yellow fever, as a minor one does for bilious or periodic fevers.

8th. That all these fevers are produced from *local causes*, more or less extensive, and that the fevers, the result of these, were limited to these bounds, that these causes are well understood, and were extensively pointed out in detail, that wherever the epidemic *extended*, there were *causes to localise it*, that where these did not exist, the cases of the epidemic *conveyed there did not extend*, and that consequently, that all these fevers arising from bad air, are no more contagious or infectious the one than the other, the liability to them is limited to the bad or infected air and personal susceptibility; and finally, that these are *of the greatest importance in their practical bearing on sanitary measures.* And,

9th. That the temporary epidemic cholera which occurred here early in December, it was shown, depended also, upon two conditions, an atmospheric and a terrene; that the first of these was different from that required to produce epidemic yellow fever, although the second was believed to be the same.

From all which the following corollaries were deduced; viz:

1st. That an *epidemic yellow fever* in New Orleans, if produced by the causes stated in our third proposition, as believed, being known, is *controlable*, that is, PREVENTABLE.

2d. That an *endemic* yellow fever, arising from the same or equivalent

causes, as above, although in a lesser degree, can also, be mainly, if not entirely controled.

3d. That the causes of bilious or periodic fevers being known also, to arise from a smaller amount, or more diluted condition of the same circumstances, although more general and extensive, and more dependent on personal hygiene, it is in the power, as it is the duty of the civil authorities to mitigate, if they can not entirely control them; and finally:

4th. That it was demonstrated, that by the proper application of curative measures, by the establishment of proper sanitary laws and police ordinances, rigidly enforced and effectually carried out, New Orleans can be made as healthy as any city in America; and that it was not only the interest of the city to accomplish these important purposes,—but that—

5th. A penalty could be as much *enforced upon the civil authorities for neglecting the removal of conditions subversive of health and life, as for any purpose* for which society was formed."

We cannot conclude our notice of Dr. Barton's truly able report, without an expression of profound regret that so respectable a periodical as the New Orleans Medical and Surgical Journal should have given place to such a paper as the "Review" of this report signed M. Morton Dowler, M. D. We are not personally acquainted with either of the parties, nor do we know their social relations to each other; but it is very evident that nothing short of the bitterest hostility could have prompted such a display of malignity, not to say unfairness, on the part of the Reviewer. We cannot believe that this "Review" was carefully examined by the distinguished editor, Dr. Bennet Dowler, before its publication, for he would most assuredly have rejected it as unworthy of the high design of scientific criticism. That such personal assaults are permitted and even committed by some of our editorial fraternity who control certain disgraceful journals, we have repeatedly lamented. Periodicals devoted to science should close their columns to every expression or sentiment calculated in the least degree to engender or to foster unpleasant feelings among men whose proper calling and whose sole aim should be to labor harmoniously for the promotion of health and happiness. D.

The New Orleans Quarterly Journal of Medicine.—Such is the title of a new periodical about to be published under the supervision of Dr. Bennet Dowler. Price $5 per annum. The learned editor's extended reputation will doubtless secure to the work a liberal patronage. He has our best wishes for his success.

Medical College of Georgia.—On Thursday, the 1st inst., the exercises of this institution closed for the term. An appropriate prayer having been made by Rev. Dr. Dumont, the report of the Dean was read, after which the degree of Doctor of Medicine was conferred by the Hon. A. J. Miller, President, on fifty-three members of the class.

The Rev. Dr. E. E. Ford was then introduced to the class, to whom he

delivered an address in behalf of the Faculty, which was responded to by J. Junius Harriss on the part of the class.

It is a source of high gratification to the friends of the College, that this class, notwithstanding the alarm occasioned by the late epidemic, was one of the largest ever in attendance at the institution. We subjoin the report of the Dean:

AUGUSTA, March 1, 1855.

The Faculty report to the Trustees of the Medical College of Georgia, that one hundred and seventy-one students were in attendance on the Course of Lectures just concluded, of whom

132	were	from	Georgia.
17	"	"	Alabama.
16	"	"	South Carolina.
2	"	"	North Carolina.
2	"	"	Texas.
1	"	"	Florida.
1	"	"	Mississippi.
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That fifty-three of these gentlemen, having complied with all the requirements of the Institution, and having undergone satisfactory examinations, are now presented by the Faculty to the Trustees as suitable candidates for the degree of Doctor of Medicine. That these gentlemen are—

FROM GEORGIA.

J. H. Howell,	R. W. Baston,	J. E. Cooke,
M. E. McIntosh,	S. W. Palmer,	S. W. Antony,
E. G. Riley,	J. L. Glenn,	C. W. Smith,
J. J. Cartledge,	W. P. Bond,	John Hockenhull,
M. D. Sanders,	M. M. Tessier,	J. R. Scott,
A. J. Vann,	V. S. Cooper,	John Sims,
J. R. Harris,	J. T. Boyd,	J. J. Harriss,
R. B. Jordan,	J. M. Greene,	C. W. Bedell,
L. C. Rhodes.	J. N. Gilbert,	W. B. Rivers,
D. A. Newman,	G. T. Snellings,	W. R. King,
E. T. Parker,	L. M. Pentecost,	W. A. Mayes,
A. M. Sabal,	J. M. Tullis,	J. W. Price,
J. F. Haley,	L. L. Saunders,	H. A. Urquhart.
W. H. Doughty,		

ALABAMA.

E. S. Rawls,	James Bates,	D. W. Johnston,
W. D. Cox,	J. W. Jones,	G. H. Holcombe.

SOUTH CAROLINA.

J. G. Davis,	W. T. Westmoreland.
J. C. A. Shaw,	J. C. Cunningham.

J. J. Shipman—North Carolina.
Thomas Tabb—Florida.
J. A. Roberts—Texas.

The Faculty also recommend that the Honorary Degree of Doctor of Medicine be conferred on J. B. Underwood, and that John B. Hendrick, M. D., be admitted *ad eundem gradum* in this institution. The Faculty also recommend that the Honorary Degree of Doctor of Medicine be conferred on the Rev. A. Henry Dumont, D. D., of Newport, Rhode Island.

GEORGE M. NEWTON, Dean.

The Savannah Medical College.—We learn that there were fifty students in attendance upon the session just closed,—of whom seventeen were graduated on the 13th inst.

State Medical Society.—We would remind our readers that the Sixth Annual Meeting of the Medical Society of the State of Georgia, will be held in the city of Columbus, on Wednesday, the 11th of April, and that the annual address will be delivered on that day at 12 o'clock M., according to a Resolution adopted at the last meeting.

Belladonna for Orchitis.—We have received a letter from Dr. Rodney Burke, of Scriven county, in which he speaks in high terms of the use of the ointment of Extract of Belladonna applied to the scrotum.

Introduction of a stick or swab-handle more than ten inches long into the stomach—its exit by an abscess—cure. By FRANCISCO GARCIA Y GARCIA, of Daimiel (Mancha baja.) Translated for the Medical Examiner from El Porvenir Medico of June, 1854.—Mateo Sanchez de la Nieta, native of the town of Daimiel, aged between 45 and 50 years, contracted a syphilitic disease, which after a time, affected the fauces and posterior part of the mouth. His attending physician, a distinguished practitioner, directed that the parts should be cleansed several times daily, and for the purpose constructed a swab with which he made the first applications, but not being sufficiently long the patient had it spliced until the stick was more than ten inches (una tercia) in length.

One afternoon in the month of September, he was alone in his house and complying with the directions of the practitioner; but the presence of the swab, the stimulus of the medicament, the contraction of the muscles of the pharynx, a spasmodic movement, the carelessness of the patient, or all conjoined, caused him to relinquish his grasp of the instrument, which remained in the back part of the mouth. While thus embarrassed, one of his daughters came in, who perceiving him in distress, and not able to answer questions, gave him water, which he asked for by signs, which not being able to swallow, was returned by the mouth and nostrils, with suffocating effect; some persons in the vicinity seeing him sought a physician; in the mean time, which was not long, the stick descended the œsophagus, the upper extremity fixing itself between the pomum Adami and the anterior portion of the fork formed by the sterno-cleido mastoideus, producing a salient angle on the left side, which the patient indicated to the bystanders. A suffocating condition recurring, caused him to abandon it, and with the movements it disappeared not only from sight but also from the touch of

the practitioner, who arrived after the patient had recovered from his paroxysm which followed that state. They gave him some spoonfuls of an anti-spasmodic mixture, which he swallowed with less difficulty than the water given him by his daughter. He recovered his speech somewhat, and complained only of anguish and smarting in the throat, and towards the left side a little above and front of the nipple of the same side, which gradually ceased, disappearing on the fourth day, the patient, physician and friends being left in an unhoped for quiet.

Eight days subsequently the patient felt, deep in the left side of the epigastric region, sharp pains, running towards the last false ribs, increasing every hour, accompanied with gastric irritation and febrile symptoms, which led the physician to suggest a resort to spiritual aid. On the following day, (the 14th from the ingestion of the stick) the greater part of the gastro-peritoneal symptoms, which indicated great peril, abated, the patient remaining almost without fever from the 17th to the 20th. Under these circumstances the practitioner proceeded to a minute examination of the patient, and ascertaining the existence of the stick in the cavity of the stomach, proposed to the patient the operation of *gastrotomy*, to which he objected his age, his severe suffering, his present comfortable condition, and finally that he would not submit, though it would cost him his life.

The practitioner forced unwillingly to yield to the entreaties of the patient, and abandon all operations, directed him to eat, assuring him his condition was not as flattering as he supposed. At the expiration of ten days (26th of the accident) the patient presented himself at the house of the physician, asking him to examine an *apostume*, as he called it, which had appeared far below the nipple of the left side. The next day it was opened by a crucial incision, and a large quantity of pus, both well formed and bloody, was discharged; with the evacuation the patient grew worse, but four days after the incision, having improved somewhat, and feeling himself much better, without waiting for the physician, he determined to remove the dressing and cleanse the wound: a female neighbor, who was present to assist him, saw with wonder what appeared to be the end of a black stick in the opening of the abscess; encouraged by the patient, she seized the foreign body and drew it, and they saw with astonishment four or five inches of the stick of the swab projecting.

In the midst of the conflict of the two, they thought of and sent for Dr. Povil, who came at once to the aid of his patient; he took the stick, and assisted by the exit of pus, contractile movements of the stomach, muscles of inspiration and traction of the woman, brought it to the surface, in *the intercostal space formed between the third and fourth false ribs of the left side*, as far as the point where it was spliced; then he seized the stick at the splice, fearing that the thread which bound it might give way, in consequence of putrefaction, which he presumed might have occurred since its ingestion: but this fear vanished when the point of the splice passing through the intercostal space, the thread was found unaltered; the extraction was continued until the extremity of the stick, to which threads or a frayed rag were tied, reached the external wound, where it stuck, causing new and sharp pains in the stomach, which, although they subsided, were followed by great distress and a soporose state. Having recovered, the practitioner continued his exertions, and introduced his thumb into the wound, and by forcibly depressing the inferior rib, succeeded in dislodging and extracting the entire swab just as it had entered the mouth 28 days before. It was followed by a flow of pus, considerable blood, and gastric juice

through the wound, together with some partially digested alimentary substances which had been eaten in the morning.

Care was taken in dressing the wound to avoid the introduction of air into it. He was placed upon his back with head and shoulders elevated, ordered a strict diet, being allowed a few spoonsful of acidulated water for drink. The stick was found to be of black poplar, (Populus nigra), and more than a tercia (a third of a Spanish yard) or about eleven inches in length. The patient passed an uncomfortable night, but slept at intervals in the early part of the next morning. On the 4th day from the removal of the stick the wound was of a dark color, owing to the presence of some coagula of blood; these came away the next day with the poultice, and the wound assumed a healthy appearance, and was completely healed in 26 days from the removal of the stick, and 49 from its entrance by the mouth.

This case occurred at Daimiel in the month of September, 1832, and was well known among the people. The statement is from the patient before death and from his children who witnessed it. In 1834 Sanchez had a light attack of cholera; but during the ten succeeding years he worked as gardner and laborer without suffering from any serious indisposition; he remained fat and healthy until May 1844, when the writer began to practice in the town. He died in 1849 of an acute attack of pleuro-pneumonia.

[*Medical Examiner.*

Epilepsy.—In a recent work by M. Herpin, which received a prize from the Institute of France, the prognosis and treatment of epilepsy are ably discussed. The remedies which M. Herpin found most successful were the salts of zinc, the ammonio-sulphate of copper, valerian, and an umbelliferous plant, the Selinum palustre. The oxide of zinc was exclusively employed in forty-two cases. Thirty-one of these had suffered from less than 100 fits; 26 were cured, and 5 were incurable; 5 had had less than 500 fits; 2 were cured, and 3 were incurable; 6 had had over 500 fits, and were all incurable. The oxide of zinc was commenced in quantities of from six to eight grains daily, given in divided doses, one hour after each meal. It was augmented two grains daily until the dose reached forty-five grains. With regard to the time when the remedy may be supposed to have had a fair trial, the following rules are laid down by M. Herpin: In children under one year, seventy-five grains should be administered before the remedy is given up. In cases over two years, and in which the prognosis is only moderately favourable, (cases of more than 100 attacks,) as much as four ounces must have been given during the treatment before another remedy is employed.

[*Virginia Med. and Surg. Jour.*

Nickel.—Professor Simpson has been experimenting upon the therapeutic properties of nickel, and announces that the sulphate of nickel possesses tonic properties, and that it may be occasionally employed with advantage as a substitute for iron or manganeses. In doses of half a grain thrice daily this salt is found very efficacious. In larger quantities it occasions nausea and vomiting. Dr. Simpson reports a case of periodical cephalalgia which yielded to this agent after salts of iron and manganese had failed; and he also mentions the cure of a woman who had suffered from amenorrhœa for ten years, but who recovered promptly under the administration of sulphate of nickel.—[*Ibid.*

SOUTHERN

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ORIGINAL AND ECLECTIC.

ARTICLE XI.

A singular Case of Abdominal Abscess. By W. W. Broom, M. D., of Kingville, Talladega County, Ala.

January 28th, 1855. This evening I was called to visit "Liz," a negro woman, aged seventeen; seven months gone with her first child: found her in a comparatively helpless condition; abdomen intensely swelled, pain on the slightest touch. The lower extremities could not be moved without the aid of an assistant; tongue slightly furred and dry; pulse 120, small and thready; skin over the abdomen very hot; examination per vaginam proved every thing to be in its natural position, except an apparent pressure of the bladder downwards; introduced a catheter, but only an ounce of urine escaped, the passage of which had previously been attended with some difficulty. By inquiry, I found that the girl had been in this condition, or nearly so, for eight days; the symptoms above described were accompanied by costiveness for which frequent draughts of epsom salts had been given. On my arrival, finding the bowels a little costive, I gave calomel 15 grs., rhubarb 10 grs., and ordered a decoction of uva ursi to act upon the urinary organs.

The disease presented more the appearance of rheumatism of the uterus, as described by Churchill, than any other affection of that organ, except an excess of the liquor amnii, there being well marked symptoms of both.

29th. Found my patient pretty much in the same condition, the medicines had acted finely, but the abdomen was still very much

swollen and very tender; continued the decoction of uva ursi, with phosphate of ammonia, ten grains every four hours, and applied a plaster of belladonna, cicuta and iodine over the abdomen. I was here, from some consideration, requested to send medicines instead of visiting the patient, to which I consented. The plaster, according to report, measurably relieved the pain in the abdomen, in so much that the patient got up and walked a few paces. The uva ursi made the evacuation of urine easy, consequently, I recommended it to be continued.

I heard no more from the case until the 5th of February, I was again sent for, saying the negro was very ill indeed. Not being at home, my friend and former colleague, Dr. W. B. Abercrombie, visited the case and directed calomel 5 grs., James' powder 1 gr., every four hours, until four doses were taken; morphine at night to allay pain. The tongue was dry and furred through the middle and slightly red at the tip and edges.

Feb. 6th. To-day I again visited the case accompanied by Dr. Abercrombie; we found the girl in great pain, the abdomen distended almost to bursting, with considerable heat; pulse quick and small; tongue very dry. The case, indeed, bore a desperate aspect, and such being the case, we considered the remedies applied should be equally so to be of any avail, and upon these conclusions we resolved to bring on premature labour, with the hope of perhaps saving one or both, as it is not an uncommon occurrence for a seven months child to live. To accomplish this design, I armed a medium sized gum elastic catheter with a strong wire, introduced it into the os uteri; then, with a gentle but firm and rotating pressure, I passed it through the membranes enveloping the fœtus; upon the withdrawal of the instrument there was no discharge of the liquor amnii, but a slight hæmorrhage took place; however, being satisfied that the membranes were ruptured, I then made a decoction of ergot 30 grs. to four ounces boiling water, and gave an ounce every two hours,—about ten o'clock that night labor pains came on, and in about two hours the child was delivered alive, but died about noon next day. Much to my chagrin, I found that the enlargement and soreness of the belly was not yet removed, but thinking rest would be beneficial to the patient, I gave her a half grain of opium and allowed her to remain quiet.

7th. This morning I find the patient, so far as the labor is concerned, doing well. The medicines given on the fifth are acting well.

8th. This morning I find the abdomen, if possible, more distended than ever; tongue dry; pulse quick and weak. Entertaining an opinion that there was possibly an abscess within the walls of the belly, I this morning confirmed the opinion by tapping, with an ordinary sized trocar, half an inch to the left of the linea alba, and two and a half inches below the umbilicus, when a gush of very fetid and offensive gas made its exit, during which I could distinctly see the belly sinking down like an inflated bladder when the air is escaping from it: when this stopped about an ounce of very fetid pus was discharged. I then applied a poultice to the abdomen over the seat of the abscess, gave quinine in tonic doses, with an ounce of whiskey four or five times a day, recommending a nourishing diet.

9th. To-day the patient appears to be pretty much in the same condition. Again I used the trocar, but about two inches lower down upon the right side, with a discharge of eight ounces of pus. Continue the same treatment. Passing by this evening, I called and used the trocar again an inch lower down on the right side, from which a half pint of pus escaped. Upon examination, I find that the abscess extends from about an inch behind the anterior superior spinous process of the ilium on the right side, down to the pubis; thence across the linea alba, about two inches to the left; thence upwards as high as the umbilicus; then turning to the right and ending about two inches above and one inch behind the anterior superior spinous process of the ilium. Hence, we discover that we have a continued abscess over two-thirds of the abdomen.

10th. Found the patient this morning apparently better; tongue moist and of the natural colour, with the exception of a dark brown fur along the centre; pulse eighty. Introduced the trocar an inch above and behind the anterior superior spinous process of the ilium, and drew off about eight ounces of very fetid and purulent matter. I then introduced the trocar on the linea alba, two inches below the umbilicus, and injected an ounce of tr. iodine of officinal strength into the abscess, and placed tents in the wounds to keep them open. Prescribed quinine two and a half grains, piperine half a grain, every three hours with an occasional glass of toddy.

11th. Found my patient improving; the quantity of pus very much diminished. Used injections of tr. iodine; continued the quinine and piperine; nourishing diet and injections to act upon the bowels.

12th. Patient very much on the decline; the injections given had had no effect. Early last night she was seized with a violent spasm,—all symptoms, however, of the spasm have passed off, except a partial paralysis of the right arm. Attributing the spasm to the costive condition of the bowels, I gave calomel 15 grs., rhubarb 10 grs., and continued the injections to procure a speedy operation. Directed liquid opodeldoc to the arm, and spts. turpentine to the spine between the shoulders; drew off a considerable quantity of pus, and injected one and a half ounces of tr. iodine.

13th. The girl had a spasm last night, but not so severe as before; had one copious evacuation during the night, after which she rested tolerably well: appears somewhat refreshed this morning, but the arm is perfectly useless; tongue not so dry as on yesterday; pulse one hundred. Withdrew the tents and about four ounces of pus escaped; threw in one ounce and a half of tr. iodine and closed the wounds by tents. Prescribed calomel 2 grs., Dovers' powder 2 grs., every four hours, continued the quinine and piperine as before; liquid opodeldoc to the arm.

14th. Found the patient this morning somewhat depressed: had a severe spasm last night. Withdrew the tents; as soon as the discharged ceased a spasm came on, but did not last more than five minutes. Injected two ounces of tr. iodine into the abscess; directed a decoction of valerian root, a tablespoonful ever four hours with ten drops vinum colchicum; bowels moderately open; pulse ninety; tongue moist. Continue prescription as before. Saw the patient again this evening; had had a recurrence of the spasm at twelve o'clock. Withdrew the tents; about two ounces of pus came away. I then introduced a female silver catheter, when about two ounces more was discharged. I then injected an ounce and a half of tr. iodine through the catheter, moving it about so as to spread it as nearly as possible over the whole surface, then closed the orifice and continued the same prescriptions.

15th. No recurrence of the spasm during the night; the patient appears to be improving; tongue moist; pulse eighty; bowels moderately loose. Withdrew the tents, and by means of a catheter drew off about four ounces pus. Can feel an indurated ridge around the margin of the abscess. Inject seven and a half ounces of warm water into the cavity, and by external manipulation endeavored to wash it out. After drawing off the water, inject two and a half ounces tr. iodine. The patient can make a little use of the arm this morning. Continue the same prescriptions.

16th. The case appears to be improving gradually; takes nourishment freely; tongue almost natural; pulse seventy, and sufficiently full; the indurations around the abscess very distinctly felt. After drawing off the pus, inject the same quantity of tr. iodine as before. The arm has some motion to-day. Continue the same medicines.

17th. The patient appears a little stupid this morning; abscess appears to be decreasing in dimension; slight febrile action to-day. Continue the same prescription.

18th. Patient improving slowly—no discharge of pus; introduced a small probe with difficulty; injected a p. p. syringeful of tr. iodine at the opening on the linea alba, but it was ejected as soon as the instrument was withdrawn; allowed the wounds to close, and continued a tonic treatment.

19th. Called on my patient to-day; found her doing, apparently, very well; pulse sixty; tongue moist and of the natural color. Ordered the prec. carb. ferri. in five grain doses three times a day.

20th. To-day the patient appears somewhat restless. Upon examination, I found a prominence immediately over the region of the bladder about the size of a common orange. Here I was again put to the necessity of using the trocar, after which, I drew off four ounces of very fetid pus; injected the cavity full of warm water, allowed it to run off and threw in one and a half ounces of tr. iodine; gave blue pill to operate on the bowels. Other treatment as before.

21st. The blue pill given yesterday has not acted; the abdomen a little swollen. Drew out the tent and placed a canula in the wound, with an escape of four ounces pus of a slight red tinge. When the running ceased, introduced a female catheter and injected two ounces of tr. iodine. Prescribed calomel 5 grs., Dovers' powder 3 grs., every two hours until three doses were taken; one ounce comp. tr. gentian three times a day as a tonic; directed the tr. iodine to be used again in the evening.

22d. The medicines given yesterday had but slightly moved the bowels; the abdomen swollen generally, with some heat over the surface; tongue natural; pulse sixty-five; abscess considerably distended. Withdrew the tent that the pus might escape, then filled it with tr. iodine; gave a dose of rhubarb and aloes; continued the tincture of gentian.

23d. The case appears to improve gradually; the medicines

given yesterday acted well; pulse eighty, slightly ptyalized; used tr. iodine for the abscess; continued the tr. gentian.

24th. The case appears to be progressing well: the discharge from the abscess very much diminished; tongue natural; pulse eighty. Directed five grains quinine with each dose of the gentian.

25th. The patient improving generally; no enlargement of the belly; abscess diminishing; indurations around the margin very distinctly felt. Continue the treatment as before.

26th. Very little discharge of pus this morning, but about three ounces of a white transparent gelatinous matter was discharged. Used injections of tr. iodine and continued tr. gentian alone.

27th. Little or no difference in the case.

March 1st. Patient considerably better; abscess much diminished; discharges about two ounces during the day.

3d. Abscess almost obliterated; very little discharge; patient walked across the house on yesterday; weakness now the prominent feature. Injected half an ounce of tr. iodine, and continued the tr. gentian alone.

4th. Abscess entirely closed; no pain in or about the region of the abscess; order the tincture of gentian to be taken for two or three weeks.

19th. Patient improving rapidly.

In presenting the above case to the profession, it is not with the supposition of introducing a novelty or a case treated with extraordinary skill, but owing to the complicated nature of the case. We find that the case was one of very difficult diagnosis, as the distention of the belly was but a natural consequence of pregnancy. The heat and pain indicative of an excess of the liquor amnii, or rheumatism of the uterus; the paralysed or immovable condition of the lower extremities indicative of inordinate pressure in or upon the pelvic cavity; hence the conclusion of a diseased condition of the uterus. The course pursued was dictated by the nature of the case; the abortion or premature labor brought on, we believe was the chief means of saving the life of the patient; for, had the fœtus remained *in utero* up to the full time, and the abscess have been opened, and the subject reduced to a mere shadow, as was the case, it would have been a case of unparalled anomalousness for her to have withstood the effects of the labour. But we would here raise an objection to the probability of her reaching that period. The size of the uterus, with the movements of the

child pressing from within against the peritoneum, which we believe to have been the base of the abscess, would in all probability, have brought on peritonitis, and under the existing circumstances, terminated in the death of the patient. The frequent use of the trocar might with some plausibility be objected to, but it was considered necessary to puncture in a number of places, to allow the cavity to be emptied without much manipulation, as well as another very important consideration—the more thoroughly spreading the tr. iodine over the surface of the abscess.

ARTICLE XII.

Two Cases of Varicella Lymphatica, in adults, with remarks. By C. C. HOWARD, M. D., of Lowndesboro', Alabama.

On the 20th January last I was requested to see Mr. J——, aged 24, overseer on Mr. E. H.'s plantation. He had been unwell at least one week, and had previously complained to me of lassitude, anorexia, tinnitus aurium, headache, pains in the back and limbs, sore throat and occasional chilliness, followed by more or less fever—for which he took quinine.

On the day above mentioned, and especially the night before, the headache, pains in the limbs, and fever, were much increased; and now, 10 o'clock A. M., he has an extensive *vesicular* eruption, the vesicles being about the size of split peas, and most numerous about the face, head and breast, (back not examined,) though many on the abdomen and some on the extremities; no induration noticed about their bases, or other evidence of inflammatory action; face somewhat swollen. He was directed to take Seidlitz powders. After catharsis he was much relieved from suffering, so that, on the following day, he was able to give to his employer's business the necessary attention.

The first appearance of the eruption, he stated, was in the night, and as I saw it, and that was *purely vesicular*—the vesicles pretty constantly being round, about the size already mentioned, and filled, apparently to their utmost, with a limpid fluid, which, in twenty-four or thirty-six hours, became opaque, of a dirty-cream color; in three or four days more they had dried into brown crusts, and in two or three days more they dropped off, leaving the skin, as far as the eye could detect, as unaltered as if they had

never been. Mr. J. has been vaccinated. His immediate family consists of a wife and child; there are two or three negroes about the house. No other case of varicella in the family, except the child, an infant near eighteen months old—for whom I prescribed a little magnesia, on the 21st; but the eruption had appeared some days before, and, perhaps, not the fortieth part as copiously as upon the father.

On the 7th February, the writer was called to the same plantation to see John, a negro man about twenty-four years old, who had one week previously been discharged as convalescent from an attack of pneumonia. Found John with fever, but somewhat disposed to sweat; headache; pains in the back and limbs; face and hands a little swollen; no symptoms specially indicating a return of pneumonia. He thought he had been steadily improving until, a few hours before the visit, he had a chill, followed by fever. *Prescription:* Quinine and ipecac.

8th. This morning John has the most abundant crop of *vesicles* I ever saw. "The body has" (exactly) "the appearance of having been exposed to a momentary shower of boiling water, each drop of which has occasioned a minute blister." Of the parts examined, these vesicles were most numerous on the face, head and breast. I think they came out more *successively* in this case than in the other, and, certainly, when the most of them had fallen off, a few were left that I judged not to be more than four or five days old. The further description given of their maturity, dessication, &c., in the other case, is sufficiently near correct for this. Of both it may be said, that there were occasionally vesicles that were flattened on top, if not actually depressed in the centre. John had been vaccinated. In the house where he was there were six beds; four in the room he was in, and two in the adjoining room, and the only passway into the latter room was through the former. These beds negroes slept in every night; and, indeed, day and night his brother, a younger man, convalescing from pneumonia, occupied a bed in six or eight feet of him: besides, several children were every morning taken to the room he was in, to be taken care of during the day, by his mother, an old woman. The number of negroes on the plantation is about seventy, and they passed and repassed as usual—no hint having ever been given out by myself that the disease might possibly be *small-pox.* The weather was cold during much of the time, the doors therefore were usually closed. It may be proper to state, that the negro

man, as well as the overseer, sometime before the eruption, complained of sore-throat, which is not only common at this time on this plantation, but elsewhere in the neighbourhood. I am very sorry I did not innoculate some of the little negroes, but so it is.

These cases are interesting because of their infrequency, and the question of diagnosis involved.

Of their infrequency, it is stated by Watson, West, Evanson and Maunsell and others, that the disease is almost peculiar to infants; rarely occurring in adults. Indeed, Dr. Gregory, in the third edition of his practice, says, "I am not aware that varicella in this its vesicular or genuine form has ever been met with in adult persons. It would appear as if the delicate cuticle of infantile life was indispensable to its development." But Dr. Watson says, "Willan has however described one unambiguous example of it in a gentleman thirty years old; and another genuine instance of it was seen by Dr. Gregory at the Small-pox Hospital in the person of an adult female." These are the only cases I have ever seen, nor have I ever seen variola or varioloid. The question of diagnosis, however, was presented, and was certainly a very important one, as well to the physician as to the negroes on the place, their owner and the community at large; and had there been any small-pox in the country, I confess, I would probably have felt more anxiety on the subject, or should if such cases were to present themselves again. I say the question as it was, was a highly interesting one; for if the disease was varicella lymphatica, as diagnosticated, then it was a very mild disease, and nothing was to be apprehended from it; and the physician might not have been sustained in the public mind had he had the cases removed to an out-house, and, in even an uncertainty of the matter, thrown the plantation, and, indeed, the whole community, into a panic, with a report that it *might be small-pox.* But, on the other hand, had the cases turned out to be varioloid, and the disease extended, as it had every opportunity (save innoculation) of doing, the censures of a suffering community, doubtless, would have been unsparing.

As I desire to be brief in these remarks, it will be taken for granted that those persons who may feel any particular interest in the subject, either have or will inquire into the means of distinguishing variola and varioloid, from varicella; and as I desire to discuss the question somewhat, shall proceed to notice the principal points of diagnosis, proposed by such authors as I have the

means of consulting. One remark, however, first, and it is this: the evidence that has been adduced in the discussion of this long and still unsettled question leads me to the conclusion, that varioloid and varicella do not spring from the same poison, "but that there is a separate disease called chicken-pox," (varicella lymphatica,) "which springs from a specific poison;" otherwise, the question of diagnosis is only one of words.

It is stated, that "the symptoms are milder in varicella than in varioloid," but the latter is represented as being a very mild disease, usually, and sometimes remarkably so; so that the difference in this respect, it is submitted, probably would not be appreciable. Again: "the eruption is more irregular as to the time of its coming out, as to its formation, and as to its continuance." But the two cases here reported went to bed at night without any perceptible eruption, and arose in the morning, I am safe in saying, with many hundreds, if not thousands, of vesicles, that increased in size very little, if at all. Again: "the vesicle is not so well defined;" but, I cannot conceive it possible that a vesicle could be better defined than hundreds, nay, all in these two cases were. Again: "it has not the central depression." True, the vesicles in neither of these two cases had any central depression as the rule, but occasionally one might be found flattened on top, and even somewhat depressed. Dr. Armstrong, after pointing out nine points of distinction between variola and varicella, says, "yet one only is to be relied on, which is the presence or absence of the central depression." To apply this rule rigidly, I should still feel somewhat doubtful as to the diagnosis of my two cases. But this central depression is certainly not wholly unimportant. What is the cause of these depressions in the *purely vesicular* disease, and in the *pustular?* *Not* the same, I apprehend, in each. In the vesicular disease, the vesicles are filled to their utmost, and there is no depression ordinarily; but if they be partially emptied, as by absorption, for instance, then the unsupported cuticle may fall, and as their apices would probably be less supported than other parts, so, they might be flattened or depressed; or, any accidental modification of the cuticle in the *centre* of the vesicle might prevent *its* rising, only to a limited degree, and thus an occasional depression exist.

But what is the cause of the depression in the pustular disease? May it not be owing to the diseased action first occurring in the "small red point observed on the skin at the commencement of

the eruption?" In the common boils this central depression may sometimes be observed; and, doubtless, it would be seen much oftener, if more frequently their apices were surrounded by vesication. Is this not so with the pustules in the vaccine disease—viz: their centres depressed by this early action of the disease on the cuticle, confining it to a certain extent? I suppose, then, that in variola the detachment of the cuticle at the *centre* of the pustule, from like cause, is not so complete as elsewhere, and hence the depression. Now, if this be an approach to the fact, this central depression is of no consequence, other than as it helps us to determine whether we have a *pustular* disease or a *purely vesicular* one.

Again: "The eruption is vesicular from the beginning, or at least from the early part of the first day; not papular, as vesicular variola always is at first." If the statement last quoted be correct, I am brought to this conclusion, viz: that small-pox, in all its forms, is either a *pustular* or, at least, a *papular* disease (the pustulation aborting in the vesicular form); while varicella lymphatica, or chicken-pox, is a *purely vesicular* one. The diagnosis, therefore, ought to, and will turn upon the question—is the disease purely vesicular? But if variola or varioloid be sometimes purely vesicular, or varicella sometimes pustular or papular, then I am quite sure, that, if these diseases were often to come under my observation, I should continually be at a loss to determine from any means of diagnosis proposed, (save innoculation,) whether the disease be the one or the other.

A Reply to Dr. Boling's Experiments with Phosphorus, and his remarks upon its dose and action when given in the form of Alcoholic solution or tincture. By S. AMES, M. D., of Montgomery, Alabama. (Abridged, by the author, from the Nov. No. of the New Orleans Medical and Surgical Journal, 1854.)

[Concluded from page 212, Art. ix.]

The sedative action of phosphorus in health is one question; its sedative action in certain forms of disease is another question. Whether it is sedative in its action on persons in health I do not certainly know, and as I have expressed no opinion about it heretofore, so neither do I intend to express one now.

A question is raised by Dr. Boling, relative to the proper size of the medicinal dose of phosphorus, which, being incidentally

connected with its sedative action as a therapeutic agent, may be more properly discussed here than elsewhere. This question, implied rather than directly expressed, is as to the possible efficacy of this medicine in the doses recommended by me in the treatment of pneumonia. The implication is, that given in doses so minute as they were estimated to be by Dr. Boling, there must have been some mistake in attributing any efficacy to them; especially when it was shown that it could be given in a dose many hundred times greater to a person in health, without any appreciable effect of any kind. This last fact, which is dwelt on with some emphasis, is exhibited in the experiment on Sam, 10th of March, in which he took at one time nine hundred and ten drops of a diluted tincture, which held in solution about one-tenth of a grain of phosphorus. "Here," says Dr. Boling, "a child, seven years old, took at a single dose, one thousand eight hundred and twenty (1820) of Dr. Ames' doses for an adult."

The phraseology here is somewhat peculiar; it is not said that the child took one-tenth of a grain at one dose, but eighteen hundred and twenty of Dr. Ames' doses; so that the objection would seem to be founded more on the relative quantity that could be given without effect than to the absolute size of the dose. This supposition is confirmed by a subsequent remark: "Yet not only did my subjects take it in doses so immeasurably greater than the doses with which such effects are said by Dr. Ames to have been produced by it," &c. Now, if such is the meaning, this instance is not the best that could have been selected for the contrast. A still stronger one could have been found in the record of cases, hereafter to be noticed, in which three, six, and even twelve grains of phosphorus have been given at a dose, with no more sensible effect than Dr. Boling witnessed from his dose of a tenth of a grain.

Dr. Boling's estimate of the dose is as follows: "In a vial containing an ounce of anhydrous alcohol, I placed four grains of phosphorus, in another two grains, and in another one grain. At the end of fourteen days, the time usually necessary for the preparation of tinctures by maceration, the time recommended by a majority of the pharmacopœias—of the four grains, about one-fourth or less was dissolved; of the two grains, about one-half or less; and of the single there remained a portion undissolved. It is fair, I think, then, to say that the saturated alcoholic tincture, instead of containing four grains to the ounce, contains in reality but about one grain to the ounce. It may possibly be a little

more; it would seem as likely to be a little less." Proceeding on this assumption, the dose is estimated to be about one sixteen thousandth part of a grain, a quantity as he remarks, almost inconceivably small. Let us see how nearly correct this estimate is.

Seeing that there was one obvious source of fallacy in Dr. Boling's experiments to ascertain the quantity of phosphorus that alcohol will dissolve, I requested and obtained the favor of Mr. Williams, principal assistant in the drug store of Messrs. B. S. Theiss & Co., a gentleman remarkable for the care and accuracy of his pharmaceutical manipulations, to institute some experiments, of which the following is an account:

1—Twenty grains of phosphorus were put into an ounce by measure of alcohol not anhydrous, sp. grav. 812 (at 70 deg. Fahrenheit) and allowed to digest nearly twelve days. The phosphorus was then removed from the vial and weighed. The loss was found to be three grains. A small part was wasted in transferring the powder to the scales, which Mr. Williams estimated at about one-eighth of a grain.

2—Two grains were put into a measured ounce of anhydrous alcohol (sp. grav. 794 at 60 deg. Fahrenheit) on the 9th of June. This was all taken up in eleven days.

3—Four grains were put into an ounce of alcohol (sp. grav. as in the preceding experiment) on the 9th of June. Twenty-one days afterwards there remained undissolved, according to the estimate of Mr. Williams and others, not more than a quarter of a grain.

4—Thirty grains were put into a measured ounce of alcohol (sp. grav. as above) on the 13th of June. Twenty days after, namely, on the 2d of July, the remainder was carefully removed from the vial and weighed. The loss was found to be five grains. There was no perceptible waste in this experiment.

5—Twenty grains were put into a measured ounce of alcohol (sp. grav. as above) on the 18th of June. On the 2d of July, the remainder having been carefully transferred from the vial to the scales, weighed thirteen and seven-eighth grains. The loss, consequently was six and one-eighth grains. There was no perceptible waste in this experiment.

The difference in the quantity taken up in the two last experiments, is to be attributed, no doubt, to the circumstance that the phosphorus used in the last, was more minutely divided. It is probable that neither solution was a saturated one, the time em-

ployed being too short to complete it. The pharmacopœias recommend the digestion in either to be continued four weeks; but I am satisfied that a solution in alcohol, to be saturated, requires a much longer time.

The solution or tincture that I first employed medicinally, on the visible effects of which my opinion of its medicinal action was founded, was made with all necessary care, to secure a saturated solution of pure phosphorus in absolute alcohol. Both the phosphorus and alcohol were tested for this purpose. It was allowed to digest more than four weeks before any part of it was diluted for use; but only a small part being used at a time for this purpose, the digestion of the remainder was continued much longer. Now, if we suppose the solution made in this way was equivalent in strength to that obtained by Mr. Williams, after only three weeks digestion, about which I think there cannot be a reasonable doubt, it must have contained at least six grains to the ounce, and the diluted tincture six-tenths of a grain, instead of one-tenth, as estimated by Dr. Boling; and, consequently, that the dose recommended by me, was at least six times larger than his estimate of it.

Still the dose remains a very minute one, so much so that physicians who are in the habit of measuring the curative power of a remedy, chiefly by its quantity, might find a difficulty in according any efficacy to one so small as this. The objection to it on this account occasions no surprise when made by those who have neither employed the drug medicinally, nor become acquainted with the peculiar activity of its physiological manifestations, in a much more minute quantity than is contained in the dose recommended—for instance: if eight drops of this diluted tincture (one grain to ten ounces) be mixed with one drachm, or one hundred drops of water, a single drop of this mixture, which contains but the one-hundred thousandth part of a grain, has a taste and smell of phosphorus strong enough to be easily recognised by those who are familiar with its sensible qualities.

But if four drops of a diluted tincture containing six-tenths of a grain to the ounce, which I suppose is the strength of that recommended by me, be put into an ounce of water, a teaspoonful of this mixture, which contains about the twenty-six hundredth part of a grain, has a taste and smell of phosphorus strong enough to be disagreeable to most persons; and half a drop of this tincture, that is, a drop of tincture of half the strength, will give off a luminous flash if dropped into water in a dark place.

The inference from these facts is obvious, but still like the opposing objection, is merely hypothetical, and the question still remains unsettled. We cannot decide between two opposing hypothesis neither of which establishes anything more than a probability. One may answer very well to effect the other, but neither proves anything unless it be that the other is not true. Something more then is required on the one side or the other; and this is the test of direct observation.

After all, therefore, that may or can be said in arguments of this kind relating to subjects of physical inquiry, the matter has always to be brought for settlement to this arbitrament at last. And consequently the only efficient, perhaps the only proper reply to the hypothetical objection under review, as applied to the doses recommended and employed by me and others, is, that the point in question had already been tested over and over again by the actual experience of competent observers; not for a brief period—by a single individual—on a few subjects—or in the same place; but for a series of years, and by a number of physicians, and in a considerable number of subjects—some of them being in places widely separated from the others; all tending to give an assurance as strong as is usually obtained in regard to new remedies or to old ones introduced under new auspices, that phosphorus in the doses recommended by me, varied no doubt, by others, and by an occasional want of proper care in the preparation of the tincture; but whether in doses larger or smaller, has exhibited medicinal qualities of the highest value in inflammatory affections of the lungs, but particularly in pneumonia as they appear in this climate. Before publishing the results of my own experience with this remedy, I consulted several physicians as to whether their experience of its efficacy generally accorded with mine, but especially as to its sedative action in pneumonia, and found there was no decrepancy of opinion as regards either. Some were consulted verbally, others by letter. Among the answers to the letters there is one which so well expresses the uniform opinion of those who have had much experience with it, that I will take the liberty to extract a portion of it, though I have not asked permission to do so. The letter was written by physicians associated in practice, which will account for the recurrence of the plural opinion, and was dated May, 1853. After saying that "no death from pneumonia has occurred in our practice since we adopted this treatment," they add, "as regards the effects of phosphorus in such

doses as recommended in your treatment, so far as our experience goes, it fully concurs with your own. In almost every case in which we have administered it, there has been a uniform and steady diminution of the frequency of the pulse with a marked quietude of the whole system. At first we were disposed to attribute this sedative influence to the aconite and quinine, but on suspending these and continuing the phosphorus, we found the same condition of things continued; and in no single instance have we found the pulse increased in frequency, or nervous excitement produced by the proper administration of this remedy." Among the other physicians of my acquaintance, some thirteen or fourteen in all, who have treated this disease by means, partly or chiefly, of this remedy in similar doses, I believe there is none, whose experience of its efficacy might not be properly expressed in the words of the latter paragraph of this letter; nor do I think there is one who entertains any more doubt about its curative power in the doses spoken of, than he does of the curative power of any other remedy that he may have employed in this disease. I ought not to omit, in this connection, a reference to the recorded statistics of the results of the treatment of pneumonia by this as one of the chief remedies, in which the mortality is found in sixty-eight consecutive cases, occurring in the course of a little over four years, reduced to less than three per centum, including one case in which the patient evidently died of a brain affection, which complicated the attack from the beginning. The result of the treatment has been the same or even more favorable, as I have been informed, in the practice of other physicians.*

2—The second conclusion of Dr. Boling from his experiments, in the order I have adopted, namely, that phosphorus is not a

* I do not wish to be understood to give an undue importance to this remedy, or to attribute to it alone the favorable results of the treatment of pneumonia with this and other remedies; I believe that aconite is equally valuable, and that quinine is frequently indispensable, while opium and blisters are valuable adjuncts, and tend very much to secure a favorable result. What I mean to say is that, in the treatment of pneumonia in this climate, it deserves to rank as a leading remedy, and one more valuable than any other single remedy I have used except aconite. Nor do I by any means intend in what I have said in defence of the dose I have been in the habit of using, to intimate that there is any specific dose which is peculiarly efficacious. What I mean to say is that in my opinion, formed after much experience with larger doses, this is large enough for ordinary purposes in the treatment of pneumonia, while it is not too large to be perfectly safe. I have to-day, however, conversed with a physician who doubts the propriety of giving it even in this dose in cases where there is a gastric complication.

stimulant, I pass over with a single remark, that my observation of effects in disease had led me to the same conclusion, as regards its medicinal action.

3—We come now to the third and last conclusion, from these experiments, viz: that phosphorus is not poisonous when given in an alcoholic solution.

This conclusion is derived from several experiments, in which doses of this medicine, dissolved in alcohol, of various sizes, were given to the two principal subjects, and were taken by himself. To *Sam*, the largest dose given was nine hundred and ten drops of a tincture, containing less than a tenth of a grain to the ounce; the quantity of the tincture given being about one ounce, the dose was about the tenth of a grain. The largest dose given to other subjects was two hundred drops of a tincture, containing less than a grain to the ounce, or about the fourth of a grain. Dr. Boling took, himself, five drops of this tincture, three times daily; allowing eight hundred drops to the ounce, each of these doses contained about the one-hundred-and-sixth of a grain. As it is not material whether these doses are estimated with entire accuracy, we may leave out of consideration the probable waste in dropping them out, by the convertion of a part of the phosphorus into hypo-phosphoric acid, which probably escaped in the form of vapor, or may have been taken in the place of phosphorus proper.

In reference to the dose of two hundred drops, or one-fourth of a grain, given to the adult subject, we find the following comment: "How much further the dose might be augmented with safety, and without appreciable effect, I am at present unprepared to say; but reasons, I think, will appear as we proceed, that will render it not improbable, that the quantity of alcohol, rather than any suppositious quantity of phosphorus, the preparations, as prescribed and given, may contain, should form the only necessary limit to the dose."

It is evident from this, as well as in another instance in which Dr. Boling has expressed a similar confidence in its harmlessness dissolved in alcohol, that he had not studied either the medical or toxicological history of phosphorus very thoroughly. Its medical history shows that it has been given with a like impunity in either, or almond oil, and in substance in larger doses and for a longer time than Dr. Boling gave it to either of his subjects or took it himself; yet its poisonous properties do not seem to have been questioned on this account. M. Magendie, for example, quotes a

number of authorities showing that at one time the common dose given by physicians was two or three grains, and upwards even to twelve grains. But this kind of doses could not be continued long; and we find accordingly, that the false security engendered by it was sadly dispelled by the homicides, reported or otherwise committed in its use, or by its dangerous effects in a less degree, so that it was soon banished from practice. After a time it was introduced again in smaller doses, but was soon given up again. It was introduced a third time only to share the same fate; and it is curious to observe in tracing out the medical history of this potent drug, how the doses grew successively smaller and smaller as the experience of its pernicious effects, in doses still diminishing, was developed in the two last periods. In the first, the dose was from two to twelve grains. In the second, it was from the tenth of a grain to a grain, it fell to a twentieth, fortieth, and even to the one hundredth of a grain.* In all this time the various sized doses were not only given with impunity but with the highest commendations of their success, and yet we find it no more able to maintain its place in medical practice in the smaller than in the larger doses. The dose had been reduced from six to twelve hundred times, and was still so much too large that physicians were compelled to stop prescribing it. Hence the impunity with which it may be given at times in certain doses, so far from being held as proof that it may always be given with impunity in the same or smaller doses, is rather looked to as a warning against trusting a poison so subtile and treacherous at all; or at least, in any dose that had been employed even to the one hundredth of a grain.

What is thus known to be true of phosphorus in any other mode of giving it may be, and I have no doubt is, true of its solution in alcohol; nor does it seem to me that the very few experiments of Dr. Boling tend at all to invalidate such a conclusion; for it is evident enough, even from the preceding brief abstract of its history that if they had been made with phosphorus in any of the modes of prescribing it heretofore in use, the results might have been just the same as they were when made with an alcoholic solution.

There remains to be said a few words about Dr. Boling's experiments on himself. I copy the greater part of the paragraph containing his comment on them, and the conclusion they led to, as

* From two to five or ten drops of a solution in either or almond oil containing four grains to the ounce. This is the officinal preparation of the French codex.

the best mode of presenting both fully and fairly before the reader. He says:

"In connection with this experimental practice on myself, I will again call attention to the views of Dr. Ames, in regard to the effects of phosphorus in his doses. Thus, he says, that it cannot be continued in the smallest quantity mentioned, half a drop, for any great length of time, without inducing considerable disturbance of the stomach, shown by nausea or vomiting, burning heat, and a feeling of oppression at the epigastrium. Though he admits, that in a quantity of two drops, a single dose, or perhaps a few doses, may be given with impunity, yet he would evidently regard a lengthened use of it, in such a dose, as a very serious matter, and tells us of one instance in which dangerous effects resulted from the administration of three doses of two drops each, at intervals of twenty-four hours. It is most desirable that we should yet be able to discover and explain the cause of these discrepancies. While Dr. Ames tells us that doses of half a drop cannot be continued for any great length of time, without the most serious results, I have myself taken it in doses of five drops, just ten times the quantity, a long time, and for eight days, without omission of a single dose, without effect. While under his observation, for a cumulative action, dangerous effects resulted from three doses, of two drops each, administered at intervals of twenty-four hours, being in all six drops taken in the course of three days, yet I have taken for eight successive days, three doses of five drops each, or fifteen drops per day without effect. Indeed, unless I should discover something in its action which has never been manifested in any of my experiments, from my own experience with the article, and from all the lights at present before me, I should not hesitate, were it not merely for the trouble of the thing, to continue it in the same manner for years."

These emphatic antithesis are continued in the succeeding paragraph, which I also copy.

"In the healthy subject, at least, any effect of the article resultsulting in nausea and vomiting, could be easily appreciated, and not readily mistaken; yet, not only did the subjects of my experiments take it in doses as mentioned, so immeasurably greater than the doses with which such effects are said by Dr. Ames to have been produced by it, but they took it under circumstances that were well calculated to form the production of such an operation. Thus, while they sometimes took it in the intervals between the meals, they also took it at times immediately before eating, and at others immediately after eating. On several occasions, I myself, having forgotten my dose, which I usually took just before eating, until I had partly finished my meal, have called for my phial, taken the dose and proceeded with my meal without disrelish, or any subsequent manifest effect."

We shall find, I believe, no greater difficulty in discovering and pointing out the cause of these discrepances, which Dr. Boling thinks is most desirable, than was found in discovering the discrepancies themselves. The first step in this process is to point out some errors in these extracts which in themselves go a good way towards effecting this desideratum.

The first error that I shall mention is, that what I said of two drop doses is applied, inadvertently of course, to the half drop doses. The latter is spoken of by me only as liable to produce considerable disturbance of the stomach when long continued; while the former are said, in effect, to be unsafe *in the treatment of pneumonia*, if continued for any great length of time. The "most serious consequence," therefore, should properly refer to the effects of the larger doses only.

Another error arises from a wrong construction of the following passage: "Its effects are cumulative; that is to say, a dose which singly is not large enough to produce any sensible effect may become very troublesome or dangerous after several repetitions at intervals *of three or four hours.* This *quality* was developed in one instance by separating it in a dose of two drops of the strong alcoholic solution three times at intervals of twenty-four hours." Dr. Boling construes this to mean that dangerous effects resulted from the three doses given at intervals of twenty-four hours; but the reader will see that the troublesome or dangerous effects refer only to the dose repeated every three or four hours, and that the cumulative quality alone is referred to in speaking of its repetition once a day.

A third error, the source of which is in part explained in the two preceding paragraphs, is in the comparative estimate of the quantity of phosphorus taken by Dr. Boling and that given to my patients, to which the danger of serious consequences was ascribed, if continued any great length of time. Dr. Boling took five drops of a tincture containing less than one grain to the ounce three times a day, supposing it to be a full grain, each dose was about the one hundred and sixtieth part of a grain; my patients took two drops of a tincture which, as we have seen, contained at least six grains to the ounce; each dose, therefore, allowing as in the other case, eight hundred drops to an ounce, was about the sixty-seventh part of a grain, given every three or four hours, more than double the quantity of the other, and repeated twice as often. The doses taken by Dr. Boling, therefore, instead of being

ten times greater, were less than half the size, or more than twenty times less than the estimate. The aggregate taken by him in twenty-four hours was about the fifty-third part of a grain; the daily aggregate given to my patients was from the eighth to the eleventh of a grain; that is, nearly from five to seven times greater. The half drop doses, to which danger of exciting considerable disturbance of the stomach was ascribed by me, if continued long, being of the same tincture, contained, of course, one-fourth the quantity of phosphorus in the two drop doses, or the two hundred and sixty-eighth part of a grain; each of these doses, therefore, is somewhat more than half (as one to one and two-thirds) the size of each of the doses taken by Dr. Boling, and their daily aggregate in twenty-four hours, compared with that of Dr. Boling's doses, is larger by from a fourth to a third. The largest quantity given to either of his subjects in one day was two hundred and seventy-two drops of a tincture having less than a grain to the ounce, or about the third of a grain of phosphorus. The daily aggregate of the half drop doses given to my patients, if repeated every four hours, is about the forty-fifth part of a grain; so that the difference instead of being "so immeasurably" great as supposed by Dr. Boling, is only as one-third of a grain is to the forty-fifth of a grain; and the measure of the difference is almost exactly as fifteen to one.

But these are minor matters. By far the most important source of these discrepancies is in the different circumstances in which the medicine was taken by Dr. Boling and given by me. Dr. Boling took it in health; I gave it in disease; an essential difference, which in the inception and progress of these experiments seems to have been entirely overlooked. It must be remembered that in all I had said of the effects of phosphorus, in the part referred to by him, I spoke of its effects in the treatment of pneumonia only. There is, in fact, with us a peculiar and decided tendency in this disease to take on gastric or gastro-enteric inflammation from even mild irritants. In this condition, phosphorus, an irritant poison, whose action as such is always directed especially to these organs, is much more likely to show its poisonous effects than in a healthy condition of these organs. Here, then, was an empty and irritable stomach, prone to take on inflammation from slight causes, to invite a development of the poisonous action of phosphorus. On the other hand, Dr. Boling took the medicine in health and at his meals. The importance of this last

circumstance as regards its probable influence over the action of the medicine is shown by the fact that some authors recommend it to be taken only on a full stomach, for the purpose of avoiding its poisonous effects. It is equally true of other irritant poisons, that a full stomach renders them less active as poisons, *cæteris paribus.* Dr. Boling, it is true, did not take his doses, literally, on a full stomach, but taking a dose *just* before eating is, practically, or so far as concerns the irritant action of a poison whose action is slow in developing itself, the same thing as taking it during or immediately after a meal. Now this was not the only time at which Dr. Boling took doses of the one hundred and sixtieth part of a grain, but the time also when he gave to one of his subjects the largest dose that either of them took, namely, a quarter of a grain. The influence of health, exercise and the regular meals, in modifying its effects, I have frequently witnessed. In the experiments made on myself, in whom nearly all such influences were absent, each dose of three drops of a saturated solution gave rise to disagreeable and soon painful effects on the stomach, as I have seen it do in smaller doses in the treatment of pneumonia; the effects on myself were severe enough to prevent me from carrying the investigation, as I intended to do, any further than the three experiments mentioned. Nevertheless, I have often prescribed it in doses of one and two drops in chronic affections of the bladder or urethra, and in seminal weakness, twice or three times a day when the patient took his usual meals, and attended to his ordinary business, without any such effects, though continued many days. If, therefore, Dr. Boling took the medicine, as seems to have been the case, in a condition of the stomach unfavorable to the development of its local action on this organ, and my patients took it in circumstances the most favorable for the development of such an action, we may find in this difference alone a sufficient explanation of the difference in its effects, even if the doses had been equal.

But, leaving these minute, and probably to the reader, tedious details, let us sum up, in a general view, the principle sources of the discrepancies between Dr. Boling's experience and mine; separating the apparent from the real. If I have written with sufficient perspicuity, it has been seen in the progress of this paper, that all the discrepancies are included in, *first:* the different circumstances in which the facts have been observed on either side; *secondly;* in the difference between facts observed on one side, and

inferred on the other; in other words, between facts of experience, and facts obtained by *a priori* reasoning.

In the first, the discrepancy is apparent, not real, even if we admit that the experiments gave accurate results. It may be true, under this administration, as I have said before, and I think, shown, that phosphorus does not act as a sadative on healthy persons; but does so act in certain forms of disease. The difference in the circumstances, health on the one hand, and disease on the other, in which the experience was obtained, might alone make all the difference apparent in its effects. So, too, as regards the poisonous action of this remedy in certain doses, its eccentricity, and other circumstances connected with the condition of the subject to whom it was given, may very well account for the difference in its effects. So far, then, there is no real discrepancy; a difference in the facts there is, because both were not looking at the same thing exactly; but there is no clashing and incongruity, as might be supposed on a superficial view of the matter. Either set of facts might be true, without in any respect impeaching the integrity of the other.

Not so, however, as regards the second. Here, the difference is not between facts observed on either side; but between experimental facts on one side, and *a priori* inferences on the other. When Dr. Boling concluded from his experiments, that phosphorus dissolved in alcohol neither acts as a sedative nor as a poison, in certain doses in disease, he overstepped the bounds of legitimate induction, and the real discrepancies began to appear. The utmost limits to which the experiments permitted him to go, is, that phosphorus is neither sedative nor poisonous, in the doses in which he gave it to persons *in health*. There was no legitimate warrant for the supposition that it does not so act in certain forms of disease. Dr. Boling saw correctly, in the circumstances in which he placed himself; but reasoned incorrectly from what he saw. His reasoning brought him to conclusions directly opposed to the experience of others; and, curiously enough, he supposed that the former are more reliable in proof of the matters in question than the latter; and affirms in effect, that the naked inferences shown of an attempt, even at verification, are the true facts; and the direct observations of others, made in the very circumstances about which he reasoned, but did not observe, are the false ones. Here, then, is a real and irreconcilable discrepancy, not, however, difficult of explanation. The truth is, as we have just seen, Dr. Boling explored one field of inquiry, and I another; and seeing nothing

where he was, concluded there was nothing to be seen where I was. He did not come over into my field in order to see with his own eyes on the spot, but chose rather to look from afar off, and through an *a priori* telescope, which hardly ever permits anything to be seen as it really is. Looking thus from his position, he thought he saw what was going on where I was better than I did on the spot; but in the nature of things this was impossible; and with the chances so largely against his seeing right, through this medium, it is no impeachment of the natural accuracy of his vision to suppose that he saw wrong.

The facts obtained in these different modes are incompatible; on one or the other side they must be wrong. The reader, who has now seen both sides of the argument, must determine the matter for himself. But if still in doubt as to which are the true and which the false, and the subject is of sufficient interest to induce him to take the trouble, let him bring the questions at issue to the arbitrament of his own direct observations in the circumstances, in which, only, the sedative and curative, or the poisonous action of phosphorus in certain doses has been affirmed by me.

TRANSLATIONS AND CONDENSATIONS FROM FRENCH JOURNALS.

New Treatment for Gonorrhœal Ophthalmia. By M. CHASSAIGNAC, Surgeon to the Hospital of "La Riboisière.

Gonorrhœal ophthalmia may be communicated by having the muco-pus of gonorrhœa of another person applied to the eyes; so that a person suffering from this disease of the eyes is not necessarily obliged to have, or to have had, gonorrhœa.

Observation has shown, beyond doubt, that men suffer more frequently from this affection than women, because man handles his organs of generation much more frequently than woman does hers.

It appears that the majority of the cases of this affection of the eyes originate by contagion. All that has been advanced in support of gonorrhœal ophthalmia, occurring by metastasis or sympathy, is purely hypothetical. These are questions yet to be studied. We do not say that the disease may not occur in any other way than by direct contagion, but the manner in which it might occur is yet involved in darkness.

The disease seems to begin, in almost all cases, very soon after

the application of the poison. Lancinating pains which are suddenly felt in the eye or forehead, are sometimes the first symptoms which attract the attention of the patient. At other times the disease is only noticed by the great injection of the conjunctiva. When the symptoms come on with moderate rapidity, it is in the following order: Considerable itching at night, or a sensation as if some foreign body were between the eyelids and globe; in the morning the edges of the eyelids are agglutinated by mucus; external tumefaction of the eyelids; injection of their inner surfaces; the semi-lunar membrane and caruncula lacrymalis much larger and redder than usual. When the disease becomes established, the redness of the mucous membrane is of an intensity observed in no other ophthalmia. It is of the most vivid scarlet. The conjunctival swelling is at its maximum. Chemosis is very marked. The tumefaction of the eyelid is characteristic, and cannot be mistaken when once seen. The fluid secreted by the palpebral conjunctiva is at first mucus, then puriform, becoming rapidly yellowish, thick and extremely abundant, irritating the skin of the cheek. Photophobia is rarely absent, but ceases very soon: its sudden disappearance is regarded as an unfavorable symptom, because it is presumable that an effusion has taken place within the eye, thus modifying the sensibility of the retina.

Among the general symptoms may be mentioned, great agitation, wakefulness, sometimes delirium, stupor, fullness and acceleration of the pulse, tongue coated.

A distinctive characteristic of gonorrhœal ophthalmia is the rapidity of its progress—six hours being, in some instances, sufficient to destroy the eye; at other times ten days elapsed before the organ was lost.

Gonorrhœal ophthalmia may commence very mildly, and continue so for several days, then suddenly attain its maximum of intensity, when the eye is inevitably lost. Sometimes the inflammation goes on very slowly and favorably in one eye—even disappears without doing any injury; then breaks out suddenly in the other eye and destroys it. The disease terminates, most generally, in purulent discharge. Ordinarily, only one eye is lost. It empties itself in several ways. Frequently the cornea is destroyed by ulceration of its circumference at the points covered by the swollen conjunctiva. There is then a hernia of the iris at one or more points. After this accident the cornea appears small and flattened, the central portion remaining tolerably clear for

some time; but vision is lost. In other instances, the inflammation extends over a large surface of the conjunctiva, resulting, finally, in staphyloma. It has been seen to terminate in hypopyum, amaurosis, cataract, ectropium or falling of the iris.

Gonorrhœal ophthalmia is a very grave affection, when it is not effectually opposed at its onset. In fourteen cases reported by Lawrence, there was loss of vision in nine; vision was preserved in the others, but with partial opacity of the cornea. In two cases one eye was lost, the other recovering.

Gonorrhœal inflammation does not run its course as other inflammations, nor as other specific affections, *sui generis*, which, after having gone through the periods of incubation, development and decline, terminate within a certain time, but this affection seems, *by incessant reinoculation with its characteristic product to reproduce, or rather to keep up the disease.*

The idea just expressed may be thus illustrated; if it were possible, by means of continuous ablution, to keep the mucous surfaces completely protected from the gonorrhœal matter, a cure would be readily effected. This view of the case is fully sustained by experiments, as well as by practice. If, then, this disease can be thus kept up by reinoculation, it becomes a matter of importance to determine at what period the pus ceases to be virulent, and also how long it would take for the effects of one inoculation to subside.

As it is, therefore, of practical importance to keep the surface entirely free from the contact of the contagious secretion, my attention has been directed to means for the accomplishment of this purpose. These consist in continuous irrigations, kept up until the disease be eradicated. My opinion is, therefore, that the best treatment for gonorrhœal ophthalmia is that which I have so successfully used in vaginitis and in the purulent ophthalmia of new-born infants, viz., continuous affusions of cold water.

In confirmation of these views, I will append the details of a case of well-marked gonorrhœal ophthalmia, treated by cold affusions alone, with the addition of ice.

Case. On the 10th August, 1849, I was called to see M. B., aged 50, for an affection of the eyes, attended with great pain and general disturbance. I found both eyes considerably tumefied, with chemosis, at the centre of which the cornea could be seen bright and unaffected; the conjunctiva was covered with a white purulent matter which also filled the eye-lashes; photophobia not

very great. He had contracted gonorrhœa a week before, and had been exposed the day previous to the strong light and heat of a forge. I ordered affusions of cold water, which were at first well applied, but the patient soon finding them inconvenient substituted in their stead wet linen. As he seemed to be no better at night, I ordered the application of ice. This was kept up with such occasional affusions as were necessary to carry off the pus.

11th Aug. Decided improvement; but as soon as the ice is omitted the pain returns.

12th Aug. Condition stationary, with less pain and secretion. Under this treatment the disease gradually yielded, and had subsided by the 26th of August. It manifested, however, a disposition to return, which was kept down by the same treatment, until the 10th September, when the case was discharged as cured, and without leaving any trace of its existence.

In conclusion, I may remark that, by this plan of treatment a harmless procedure is substituted for the more violent and hazardous remedies in common use in gonorrhœal ophthalmia.—[*Rev. de Thérap. Médico-Chir.*

[Note.—It is evident that the above plan of treatment would be of very difficult application in children; and as the plan recommended by Dr. L. A. Dugas, in the Southern Med. and Surg. Journal for 1837, p. 81, for the treatment of purulent ophthalmia, and since then used by himself and the writer with uniform success, is attended with so little trouble, and relieves so much more rapidly than the above treatment, that we give it, as it might answer equally as well in gonorrhœal ophthalmia.

The eyes are to be bathed every hour or two with tepid diluted chloride of soda (ʒss. to a quart bottle of water). During sleep, a bit of linen to be placed over each eye, and kept moist with the same solution. Under this treatment it rarely requires more than eight days to produce a cure.—R.]

New Treatment for Prolapsus of the Rectum.

Though this disease is mentioned in most of the ancient works, it is only at the present time that any just idea can be obtained concerning it. Morgagni complains that the pathological anatomy of this affection did not fix the attention of his predecessors, nor of his contemporaries. Boyer did not have a very clear idea of it, since he thought it was constantly formed by a prolapsus of the mucous membrane of the rectum. M. Cruveilhier gave it particular attention. Dupuytren, Blandin and M. Robert endeavored

to remedy the disease by a rational operation. Since then, and but recently, it has engaged the attention of M. Duchaussoy.

By prolapsus of the rectum is sometimes meant only a prolapsus of the mucous membrane, either simple or complicated with hemorrhoidal tumors, or sub-mucous fibrous tumors; at other times, it is the rectum itself which protrudes with all its membranes: in this case there is a real invagination of the rectum, passing through the anus. Other affections, such as an invagination of the colon or of the cœcum passing through the anus, may resemble prolapsus of the rectum. A careful examination, however, will make the diagnosis clear. It is not intended to call attention to these various affections, but to the prolapsus of the rectum, strictly speaking, or, more properly, to the invagination of the rectum passing through the anus.

In prolapsus of the rectum the intestine becomes invaginated, resembling the finger of a glove when partially turned inside out. A more or less considerable extent of the rectal mucous membrane is thus placed on the outside, red, injected, presenting transverse folds; this mucous membrane has the base of the cone formed by the intestine, and is continuous with the skin around the margin of the anus. The summit presents an orifice into which the finger passes with ease; a slight pressure upon this tumor will cause it to return within the anus with facility. After the reduction is effected, the patient has no power whatever to contract the sphincter muscle—consequently, walking, lifting, going to stool, &c., will cause the intestine to protrude. Pathological anatomy has demonstrated to M. Cruveilhier that all the intestinal membranes are dragged out, and that consequently the peritoneum, which covers the anterior and lateral portions of the rectum, is also drawn out, an important fact to be remembered in surgery.

A fact well studied by M. Cruveilhier, and since verified by M. Demarquay, is the atrophy of the sphincter and levator ani muscles when the disease has continued a certain time.

A means generally adopted for the relief of children, and which succeeds well, is cauterization with the red-hot iron. A slight cauterization, then, at opposite points of the anus, will suffice to relieve the case. The cure cannot be attributed to inflammation caused by the cautery, because it may be instantaneous. M. Demarquay thinks that the cure is due alone to the cauterization. Dupuytren's plan is to remove four folds, with curved scissors, radiating from the anus; the cicatrization of these wounds reliev-

ing the prolapsus. M. M. Blandin and Robert removed a triangular portion from the margin of the anus. Blandin not only cut through the mucous membrane, but through the sphincter also. This operation is not without danger; it exposes to hemorrhage and to inflammatory accidents, and if it does reduce the size of the anus, it does not restore the tone and energy of the sphincter and levator ani muscles. M. Demarquay's operation which is to remove a triangular portion of the rectal mucous membrane, if not easier to perform, is at least more efficacious. This operation also exposes to hemorrhage, but the inflammatory process does not extend so deep, and therefore acts more properly upon the muscular tonicity. The mere removal of this mucous portion does not cure, but only palliates. The contractility of the sphincter and levator ani muscles can be restored in children with the red-hot iron. But when the disease has continued for twenty years, and when there exists no contractility at all, other means must be employed. In these cases M. Demarquay employs the galvano-puncture, passing the needle through the sphincter and levator ani every morning for twelve or fifteen days.

The following is the operation as performed by M. Demarquay, upon a woman 59 years of age, with prolapsus of twenty years standing: The patient being under the influence of chloroform, a triangular portion of the rectal mucous membrane, of considerable extent was removed, the fibrous membrane not being included; the edges of the wound were drawn together by a few sutures. After the wound was healed, it was plainly perceptible the sphincter and levator ani muscles were without action. It was to restore this lost action that M. Demarquay employed the galvano-puncture. A needle was implanted on each side of the anus every morning, and a current of electricity passed along them, in this manner exciting the muscles to contractility, which was perceived in a few days by passing the finger into the rectum. The patient was entirely relieved.—[*Ibid.*

Induration of Sub-maxillary and Sub-lingual Glands.

We find in the *Revue de Thérap. Médico-Chirurg.*, the following treatment of Induration of the Sub-maxillary and Sub-lingual Glands. It was used in a case which had originated from an inflammation of the tongue, but as the disease was of very slow progress, it was for a long time neglected, then treated successively, but without success, with mercurial and iodine ointments. M.

Pondman prescribed the ointment of Prof. Hoppe de Bâles, which is made as follows:

℞. Black oxide of copper, 4 parts,
Lard, ... 24 "

Mix carefully, and rub the indurated glands twice daily.

At the end of a week the tumor was softened and lessened in size; six weeks after resolution was complete.

Camphor in Atonic Ulcers.

M. Uytterhoeven is using, with great success, at the "Hôpital Saint-Jean de Bruxelles," the following ointment:

Ointment of Marsh Mallow, 30 parts,
Camphor, ... 4 "

For atonic and callous ulcers two dressings daily will very soon produce a favorable change. If there is tendency to gangrene, powdered cinchona, charcoal and chloride of lime are added.

[*Jour. de Méd. de Bruxelles.*

An account of the Cases of Dislocation of the Femur at the Hip-joint, treated by Manipulation alone, after the plan proposed by W. W. Reid, M. D., *of Rochester, which have occurred in the N. York Hospital during the past two years.* By Thomas M. Markoe, M. D., one of the Attending Surgeons.

[Concluded from page 229.]

Case 10.—Dr. Dewitt C. Peters, late house-surgeon of the N. Y. Hospital, now of the U. S. Army, writes from Pawnee Fork River, Kansas Territory, under date of Sept. 24, 1854, "I have have had one case of dislocation of the head of the femur into the ischiatic notch, which I reduced immediately after it occurred, by putting the man under the influence of ether and employing the method of Dr. Reid." The man had been thrown violently by an unruly mule he was attempting to harness.

The following letter, from Dr. W. Parker, Professor of Surgery in the University of the State of New York, adds two more valuable cases to our list.

New York, November 10, 1854.

Dear Sir:—In compliance with your request, I send you an account of two cases of luxation at the hip, which I reduced after the plan proposed by Dr. Reid, of Rochester, N. Y.

Case 11.—July 11, 1853. I was called in the evening, to Mr. P—— C——, a contractor, hale, muscular and forty years old. I found him lying on the carpet, complaining of pain. He was thrown from his carriage, by the running away of his horse. On

examination, I found the left limb an inch and a half shorter than the other, and the foot turned inward. The head of the femur was in the sacro-ischiatic notch.

I put him *fully* under the influence of chloroform, and proceeded to reduce the thigh. In my first attempt, I carried the head of the bone into the foramen thyroideum. By a slight movement and without force, the head of the bone passed up to the notch. I at once made the second trial, and carried the bone into place with the utmost ease. The patient was soon at his business.

Case 12.—November 1, 1854. Mrs. K., aged forty-four, fell some eighteen feet, injured the brain and luxated the left thigh. I saw her at two P. M. Advised to dress the head, get up reaction, and I would be back in a few hours to reduce the limb. This was a luxation upon the dorsum. She was strong and muscular.

I found her in the evening warm and sensible. I applied chloroform and proceeded to reduce. I accomplished it after the plan of Dr. Reid, without any violent effort and in a most satisfactory manner. I am prepared to say, the profession are under great obligations to Dr. Reid for the plan of treatment which he has suggested and demonstrated in the reduction of luxations at the hip-joint. With the aid of *an* anæsthic the plan is perfect. W. P.

Case 13.—Samuel Gordon, aged thirty-seven, Ireland, laborer, was brought to the N. Y. Hospital, November, 22, 1854, with a luxation of the right hip, and a fracture of the right leg. The accident had occurred immediately before admission, from the falling of the wall of the Gas-house. The head of the bone was found on the dorsum ilii, rather low down towards the ischiatic notch.

Nov. 24. The leg having been dressed firmly with pasteboard splints, so that it might not receive injury during the reduction of the hip, the patient was fully etherized and Reid's plan of reduction was tried by Dr. Watson, twice or thrice without effect. This plan was abandoned, and the pullies were faithfully and for a long time employed. The head descended, but would not pass into its socket. Thinking that Jarvis's Adjuster would give more control over the movements necessary in replacing the bone, it was applied, and with it the head of the femur was brought down so that it seemed ready to slip in, but on cutting the cord it was found unreduced. It was thoroughly tried until the steel shaft bent, but without success. Under these discouraging circumstances, the pullies were again about to be applied, when it was thought best to give Reid's plan one more trial. The manipulation was performed twice, without success. The third time it was done more deliberately and more carefully, and when the head of the bone was brought to the lower edge of the acetabulum, it was retained there for a time and the rocking motion performed in all directions, and when all seemed loose and free, the abduction was increased, without any jerk or sudden motion, and the limb brought down

thus strongly abducted towards the straight position; as this was done, the head of the bone slipped into place with an audible snap.

From the small number of cases here presented, even with the addition of those recorded in Dr. Reid's paper, I do not consider that we can obtain data sufficient for the final appreciation of the new plan of reducing luxations of the hip-joint. Still, they seem to be sufficient to show us that the plan may be safely, easily and successfully applied to a certain number, and probably to a very great proportion of all the cases which occur. The cases which are related embrace every instance of dislocation of the femur which has presented itself in the Hospital during the last two years, and a reduction was always effected without the aid of pullies, except in the one case of Dr. Halsted, No. 7, and here a modification of the manipulation, which had previously proved successful, was not tried. In Dr. Post's case, No. 4, the reduction was finally effected from the foramen ovale by the usual mode, though without the pullies, but it was brought, by the manipulation employed, to this point from the ischiatic notch, from which it would surely have required the pullies to displace it on the old plan. It is to be observed, too, that our experience has been progressive, and while, at the time Case No. 4 occurred, we did not know how to reduce the bone from the foramen ovale by manipulation alone, that we have since learned the true method of doing it, if our experience, in Cases 8 and 9, can be relied on. Though we have failed, then, in reducing, by the new plan, two cases out of the thirteen, yet I think that the record shows good reason for believing that all might have been so reduced, if we had known at the time as much as subsequent cases have taught us. The applicability of the plan to cases of long standing, is well known in Merritt's case, No. 3, where twelve weeks had elapsed, from the time of the accident, and in which, though not permanent, the reduction was effected with comparative facility.

With regard to the rationale of the process, most of those who have written on this matter are in the main points agreed. The head of a dislocated femur is retained in its new position by a mechanism which does not exist in any other joint, and which is produced by the fact of the muscles not being inserted into the head, but into the trochanter, nearly three inches from the head, and that from this point of principal muscular insertion the neck goes off at a large angle from the axis of the shaft. From this, it happens that when the head of the femur is thrown out of its socket, the trochanter no longer stands out more prominent than before, but being held firmly by the muscles which are inserted into its base, it is prevented from rising any more than enough to let the head out of the acetabulum, while the head and neck, slipping to the one side or the other, are found lying in such a manner that the side of the head, neck and trochanter are in contact with some part of the outer surface of the pelvis, varying, of course, in the different forms of luxation. This being borne in mind, it will be clear that

any attempt at reduction, which merely brings the head of the bone to the acetabulum, will not succeed in making it enter that cavity, because of the lying-down position of the neck and trochanter against the side of the pelvis. We need, therefore, not only to bring the head over the socket, but at the same time to raise up the trochanter, and neck so as to allow the head to enter. Now, in the ordinary methods of reduction, this raising up of the trochanter, so as to put the neck in the proper direction for the head to enter its socket, is done first, by the action of the pullies, and the approximation of the head to the socket is done second, by the continuation of the extension. This raising of the trochanter is, of course, opposed strongly by the muscles inserted into its base, causing the head to be pressed more and more firmly against the pelvis, and increasing the friction, and thereby causing, by far, the greater part of the difficulty in bringing down the head to the level of the acetabulum. It is in this, principally, and I am myself disposed to say only, that any active muscular contraction opposes the reduction of a dislocation of the hip-joint. True, the large muscles around the joint are thrown into action as soon as extension is made; but this is an action excited by the extension, and, that it is a very feeble opposing force, is evidenced by the facility with which these muscles give way to the force of a single unaided arm, when a fracture of the neck of the femur is concerned, in which, of course, none of the friction alluded to can occur. This comparative action of the muscles, in fracture and in dislocation, is very strongly and appropriately insisted upon by Dr. Reid.

The process by manipulation avoids this main difficulty, and, as it were, eludes the opposition of the muscles. The trochanter, being fixed by the insertion into its base of the pyriformis, the two obturators, the gemelli, and the upper part of the quadratus, acts as a fixed point or fulcrum, upon which, by moving the limb, the head of the bone can be made to describe a circle round the fulcrum. When we remember that this fulcrum is not, strictly speaking, a fixed point, but has a certain degree of motion of its own, we can easily see how, by means of this moveable fulcrum, the head of the bone can be placed, by varying the motions of the limb, on almost any point within two inches around the acetabulum, and, of course, over the acetabulum itself. If this manipulation is made in such a way as not to raise the trochanter from lying against the pelvis, then, when the head comes over the acetabulum, a slight rotation, such as is given by the rocking motion employed, will sufficiently raise the trochanter to let the head slip in without provoking to opposition the trochanteric muscles, and if the movements be made in such a direction as to relax the stretched muscles, the whole may be accomplished without calling forth the slightest muscular opposition from the beginning to the end of the procedure. This principle, in its application to the different forms of dislocation, presents some variations. In the dislocations on the dorsum, and on the ischiatic notch, for their mechanism is for

our purpose identical, the principle has its best illustration; and, if any one will take the skeleton or the dead subject, and go through the process, he will perceive that, by adduction, the tense rotators are relaxed, and that, by flexion of the thigh upon the trunk, the head is caused to pass down behind and below the acetabulum, and then, by carrying the knee out so as to abduct the limb, that the head comes toward the lower portion of the acetabulum where its margin is least prominent. At this point, I wish it to be observed, that our mode of procedure varies a little from Dr. Reid's. He recommends, when the head is brought by abduction close to the lower edge of the acetabulum, that, by the rocking movement already described, it be caused to slip in. This is well, and will probably answer in many cases, but it failed us so completely from the first, that we were led to add the bringing down of the thigh to the straight position in a state of abduction, still keeping up the rocky motion, and it has been uniformly in the act of thus bringing down the limb, that the reduction has been accomplished. On looking at the parts in the dead subject, it will be seen that this movement of the limb, when the head has reached the lower margin of the acetabulum, tends directly to roll the head upwards over the edge and into the socket. The mechanism of the reduction from the foramen ovale has already been alluded to. I do not know of any case of reduction from the pubes.

If the proposed plan should prove, on further trial, to be as successful and as free from danger as it thus far has been, one most valuable feature of it, as a surgical resource, will be its availability. Wherever a surgeon, with his bottle of ether, can go, there the dislocated hip can be reduced, without instruments, without appliances, without assistants. I well remember finding myself, in the year 1848, in a country village in Vermont, in consultation on a case of dislocated hip of some weeks' standing, in which it was difficult for us to persuade the patient's friends that there was anything more than a sprain of the joint. It was late on a cold autumn day, and we were about twenty miles from any place where pullies could be obtained; but, nevertheless, we made such extempore arrangements as we best could, and by the help of an old tackle-block and some bed-cord, with counter-extending bands of hanks of home-spun yarn, we proceeded to attempt the reduction. If we had been heartily seconded by the friends and family, we could, I have no doubt, finally have succeeded, even with our clumsy apparatus; but the doubts and hesitations on their minds, and their unwillingness to allow the patient, a stout, muscular young woman, to be so long and so repeatedly subjected to our unsatisfactory attempts, finally decided the case against us, and we were dismissed without thanks or fee, and the poor girl's hip has never been reduced to to this day. I have often thought since, how different an aspect matters would have worn, if we could have brought the manipulation to bear upon the case, and how different a result might

have been obtained for the unfortunate patient. No better illustration, however, could be given of the availability of this operation than that given in the letter of Dr. Peters, giving an account of Case 10, in which he says, that the accident occurred in the heart of Kansas Territory, five hundred miles from the nearest fort. If the poor man had depended upon pullies for the reduction of his dislocation, how much delay and suffering must he have undergone, from which he was saved by the simple fact that Doctor Peters was familiar, during his hospital course, with the management of these cases by manipulation, and was therefore able, on the spot, to effect with ease a reduction which every day's delay would have rendered more difficult.

Everything in our experience thus far seems to indicate that this method of reducing luxations is as safe, if not safer, so far as the integrity of the joint and its after usefulness is concerned, than the reduction by forcible extension with the pullies. The method is not, however, without its dangers, and these mainly arise from the immense amount of force which can be exercised by acting on the long arm of so powerful a lever as the whole limb, while the short arm has at most a length of three inches. By the inconsiderate or misdirected action of this lever force, one of three accidents might be produced: either the muscles holding the trochanter, and thereby forming the fulcrum on which the power is applied, might be torn from their attachments; or, if they held fast, the tissues, round and among which the head passes in its movements, may be extensively lacerated or contused; or, lastly, it seems to me very possible that the neck of the bone might be broken by too violent abduction, forcing it against the side of the pelvis. Though happily these dangers are thus far only theoretical, yet the anatomy of the part shows that they are real, and each one of them might have most serious consequences. It would not be possible to lay down any specific rules whereby these dangers are to be avoided, except by insisting on that almost universal law of surgical manipulation, that every thing is to be done with gentle moderate force, and never with sudden violence. As far as my recollection serves me, and I myself assisted in almost every case reported, we never have accomplished any thing by proceeding in a direction where great force was required to continue the movement, but have always succeeded by finding a direction in which the mere continuance of the movement, without force, has brought the head into the proper position. It will be noticed, by looking over the cases, that in many of them, before the head went into its socket, it slipped about on the outer surface of the pelvis, taking sometimes one and sometimes another of the four positions usually spoken of as the four forms of luxation of the hip. This in some instances happened several times, and in the two instances of failure, this change of position was all that could be accomplished. Now, it cannot be doubted that this extensive movement of the head of the bone must be attended with

a corresponding amount of laceration and displacement of the tissues among which it passes, and although the mischief thus done may be confined to the areolar tissue in the muscular interspaces, still it is an injury which may add to the dangers of after-inflammation, and is, if possible, to be avoided. I suppose this can only be done by defining more accurately the precise method of procedure to be adopted in each case, so that no experimental or ineffectual trials shall have to be made, but the operator shall be able at once to do exactly what is necessary to bring the head of the bone to the point desired.

The above account had been prepared for the press, with the exception of Case 13, which has since occurred, when a case presented itself which offers some points so important in their bearing upon what has already been said, that I add the history here by itself, rather than incorporate it with the other cases.

Case 14.—Patrick Barry, aged 42, was admitted to the New York Hospital, Oct. 23, 1854, with a dislocation of the left femur, which had occurred seven weeks previously, by a fall from a rail-car while it was in motion. The symptoms were unequivocal, the limb being shortened $1\frac{3}{4}$ inches, the ball of the great toe resting on the instep of the sound foot, and the head of the bone being distinctly felt upon the dorsum of the ilium. The patient was a man of good muscular development, but the injured limb was somewhat wasted and flabby from inaction. Two days after admission he was put under the influence of ether, and Reid's manipulation was tried. The head descended as usual, until it came opposite to the lower margin of the acetabulum, but from that point, as the limb was brought down, it slipped on to the foramen ovale. The manipulation was repeated several times, with all care, varying the degree of abduction on the various trials, but without success. It was impossible to make the head rise over the lower border of the acetabulum so as to slip into its place. After numerous thorough and careful trials, the manipulation was abandoned and the pullies ordered to be applied. Before this was done, it was thought best to place the head of the bone on the foramen ovale, and from that point to try and reduce it by the usual method recommended by Sir Astley Cooper. The head was accordingly placed on the foramen, and while the upper part of the thigh was grasped by an assistant and lifted strongly outwards, I took hold of the ankle and made extension and adduction. The head seemed not to move at all under this force, and while making strong adduction a crack was heard, every thing became loose about the joint, and on examination it was evident that a fracture of the cervix had taken place, leaving the head in the foramen ovale. There was nothing further to be done but to put the limb up in the straight apparatus, hoping that, if we could obtain union, he would have as useful a limb as those ordinarily left by fracture of the cervix, and certainly a better limb than if the dislocation had been untouched. Thus far, Nov. 25, every thing has gone well, and

promises union, with a shortening of about an inch. I am sorry that we must accept this case as one of failure of the new plan after what we considered a fair trial; for myself, however, I do most profoundly believe that it failed simply because we have not yet learned enough about the manipulation to adapt it to the condition of parts concerned in this particular instance. That we shall yet acquire that knowledge, I see no reasonable ground to doubt. With regard to the fracture of the cervix, we were all surprised at the slight amount of the force which was competent to produce such a mortifying accident. It adds double force to the caution given above, when speaking of the possibility of that accident, and it is not a little remarkable that the paragraph containing that caution was written on the very morning of the day when the production of the fracture verified the necessity of the warning. Dr. Watson, in a note to me, speaks of a fact which he says, "I have on undoubted authority, viz: from one of the professors in the School of Medicine in Toronto, Ca., that an accident, similar to that of Case 14, occurred in that city, while the surgeon was attempting to reduce a luxation of the hip by Reid's method." Finally, it must be observed that the new plan is entitled to none of the blame of the fractured cervix. The accident took place after Reid's manipulation was abandoned, and while we were attempting the reduction according to the old established and classical method.—[*New York Journal of Medicine.*

On a Peculiar Form of Malignant Inflammation of the Lips and Face, resembling Malignant Pustule. By W. Parker, M. D., Professor of Surgery in the College of Physicians and Surgeons, New York.

There have come under my observation, within a recent period, several cases of a peculiar form of inflammation of the lips and face, which resembles somewhat phlegmonous erysipelas, but more strikingly, especially in its commencement, malignant pustule, and, in its subsequent progress, carbuncle. It, however, differs from these affections in some essential particulars, which will be noticed after giving the details of the following cases, which illustrate the peculiarity of this form of disease.

Case 1.—I first saw this patient on the 18th of last December. He was a young man, aged 23, merchant, of good character, temperate habits, and in the previous enjoyment of good health. About a week before I visited him, a small pustule made its appearance upon the central portion of the lower lip, just below the edge of the vermillion border. It became painful, had a livid areola, gradually but slowly enlarged, and finally broke and began to discharge. The pain increased, and the swelling extended downwards upon the chin. At my first visit, about this period, the tumefaction had reached as low as the os hyoides, and had ex-

tended over the right side of the face to the head; it was hard to the feel, of a livid color, insensible, and had now much the appearance of a carbuncle. The lips were greatly tumefied, everted; gums swollen, and of the same livid color; tongue moist; inside of mouth unaffected; ptyalism considerable. The lower lip, about the seat of the original pustule, appeared gangrenous. The pulse was 120, rapid and feeble, respiration unaffected. He was able to get up and sit in the chair, but was suffering from great depression of the vital powers. The course pursued consisted of deep scarifications of the lips and yeast poultices to the swelling, and stimulants to sustain the general system. The swelling continued to extend, involving successively the neck, face, and finally the head. He died on the following day, the 19th, late in the evening.

Case 2.—I visited on the 15th of January, a patient, aged 45, merchant, suffering from what appeared to be a carbuncle of the under lip. He was of a good constitution, temperate habits, and in the enjoyment of good health, previous to the present attack. Four days before I saw him, he was supposed to have cut the lower lip slightly, and applied to it arnica. The inflammation commenced at this point, the lip swelled largely, became everted, had a livid color, was tender, hard, and the seat of a burning pain. At several points there were small sloughy apertures, discharging thin pus. The constitutional symptoms were considerable, but not sufficient to confine him to his room. The treatment consisted of free incision and yeast poultices to the lip, and sustaining remedies for the general system. Portions of the lip sloughed, but he recovered.

Case 3.—Mr. W., aged 26, married, furniture dealer, of good habits, and hitherto perfect health, discovered a small pustule on the under lip near the right angle of the mouth, on the second of April. It was tender on pressure and had a hard base, but attracted no other attention. During night the disease extended considerably, involving the whole lid, and the right side of the face in a hard, livid and painful swelling. On the evening of the second day his physician first saw him, and found the lip greatly swollen, of a livid color, and the seat of a burning pain. He scarified the parts for the purpose of local depletion, and also applied leeches. The swelling continued to extend, involving the right side of the neck and face to a great extent. I saw him on the 7th, at 11 A. M. His symptoms were then most unfavorable, pulse 130 per minute, intermittent every seventh or eighth beat, weak and small; respiration rapid, moaning; skin warm and moist; urine free; pupils much dilated; mind clear. He complained of oppression about the chest, and had not been able to obtain sleep. Both lips were involved in the swelling; were hard, livid, and insensible; the whole side of the neck and face was similarly affected, the eye being nearly closed. The frontal vein was livid, red, and prominent, and the veins of the cheek were also visible as if distended. The treatment consisted of deep scarifications of

the lips, and yeast poultices to the part, with anodynes and stimulants. I visted him again at six o'clock, P. M., and found him rapidly failing; treatment of no service. He died the same evening.

Case 4.—I was called, April 10, to see Miss S., aged 30, occupied as a governess, of good constitution, whom I found laboring under the same difficulty as in the preceding case. Her history was almost precisely similar. Five days before, while in the possession of apparently perfect health, she first observed a small pustule on the lower lip, just below the red line of mucous membrane; it was regarded as a small boil, and no attention paid to it. On the following day the pustule had enlarged somewhat, was hard, and had a livid areola, but she continued about her employment; she spent a feverish, restless night, and on the next day called her physician. The disease gradually extended, assuming the appearances already noticed, and for two days no danger was apprehended. Her symptoms now became much more unfavorable, and at this period I first saw her. She was lying in bed quite insensible; deglutition difficult; respiration laborious; right side of body paralyzed; lips large, everted, and cold; right side of face, neck and forehead swollen like the lip, hard and purple; right eye protruded; pupils dilated and insensible. On making an incision into the lip, the cellular substance was found filled with small deposits of pus, which were forced out on slight pressure. As she was moribund, treatment was of no avail.

From the history of the foregoing cases it is evident that this disease differs from erysipelas, for which it has in several instances been mistaken in its origin in a pustule, without a chill or other constitutional disturbance, the hardness of the swelling, its purple or livid color, insensibility, and absence of much pain. It differs from carbuncle, which in some features it resembles in the class of individuals which it attacks—they being young, temperate, of sound constitution, and in the previous enjoyment of good health—and in its rapidly fatal course. Carbuncle, on the contrary, occurs by preference in persons enfeebled by age or vicious habits. It differs again from true malignant pustule, to which in its origin it seems allied, by attacking persons who have not been affected by poisonous wounds, or who have been liable to the introduction of animal poisons into the system.

This disease would therefore seem to be peculiar, having many points of resemblance to other similar affections, but still not so closely allied to any one to warrant its classification under the same head. In every instance which has come under my observation, the pustule has been seated upon the lower lip, and from this point the inflammation has spread. In a fatal case related to me by a physician, in whose practice it recently occurred, the pustule was seated upon the side of the nose.

Although the nature and progress of the disease show a vitiated state of the system, in no instance have I been able to trace the

attack to the contact of poisonous matter, or its reception into the system in the food or drink. In every instance the patient has been in the enjoyment of good health, and the progress of the disease, though rapid, has excited so little local and general disturbance as not to excite alarm until a short time before its fatal termination. The general symtoms are of a typhoid character, the vital powers being evidently depressed either by the influence of the disease itself, or, which is more probable, the cause upon which the development of the disease depends.—[*Ibid.*

The Physiology of Menstruation and Conception. By Prof. BISCHOFF.

The attention and laborious investigation of the student has been long directed towards that most interesting and important point, the physiology of menstruation and conception, and amongst the many who have labored in this field, we know of none more distinguished than Prof. Bischoff. We design to give our readers an abridged sketch of his recent labors, and the results to which he has arrived.

M. Bischoff gives in detail his examination of the organs of generation in thirteen women, who had died suddenly whilst menstruating; the death, in most of the instances, being the result of accident or violence. These examinations were made with the greatest accuracy; and, when taken in connection with the previous history of each case, will aid very much in determining the physiological facts involved. Our space forbids us from presenting the minute details of each dissection, and we will therefore only give the deductions derived from them.

Professor Bischoff remarks that these cases confirm the doctrine, that in woman at every menstruation a follicle ripens, swells, and bursts, that the ovum escapes, and that a corpus luteum is formed. The eleventh case seems to prove that the full consequences of menstruation are not in every instance necessarily carried out, but that a follicle may swell, and the ovum ripen without the bursting of the follicle, or the escape of the ovum. Such a condition will cause sterility, notwithstanding menstruation. Perhaps, also, the pain of the mentrual period depends upon this incomplete development.

A woman may not menstruate, and yet she may conceive; for the essential condition, the ripening and escape of an ovum, may proceed, and only the usual outward symptoms of this event, the secretion of blood, fail. Prof. Bischoff remarks, that he could never succeed in finding the ovum, but observes that he does not believe that it is so soon destroyed. He says there are but two cases known to him where it was so found, and that only one of these presents the desired certainty. This is the following observation of Prof. Hyrtl, of Vienna:—Thérèse Michal, aged 17, died on the 10th of October, 1844, of Peritonitis, in the clinique of Prof.

Oppolzer. She had only menstruated twice in her life, and the last time was two days before her admission into the hospital on the 8th October. The breasts were tolerably developed; the pubes slightly covered with hair. The hymen was uninjured; the uterus of moderate size, compact, its cavity filled with a considerable quantity of thick blood; the mucous membrane was so loosened as to resemble a half-liquid plastic exudation. The lining membrane of both Fallopian tubes was suffused, loose, and covered with mucus. Both ovaries were of fair size, but the left one showed a ruptured follicle of the size of a large hazel-nut, filled with semi-fluid blood. Prof. Hyrtl submitted the parts to careful inspection under the microscope on the same day. Neither in the vagina, uterus, or tubes, could he find a trace of spermatozoa. But by a careful examination of the left tube, in that part which traverses the substance of the uterus, he found an ovulum, with all its characteristic properties, somewhat dull and turbid indeed, but fully recognisable. Hyrtl believes he even detected the germinal vesicle. This is a remarkable anomaly, since the germinal vesicle of every ovum, when it has left the ovary, has disappeared. Prof. Hyrtl had the ovulum immediately drawn by his artist, and exhibited it on the same day in his lecture on physiology. This case is free from doubt, as there is no room to suspect coitus. Prof. Bischoff regrets that he cannot admit as much with reference to the cases of Dr. Letheby, published in the "Philosophical Transactions" for 1852, but his reasons of dissent do not appear to be very valid.

Prof. Bischoff takes occasion to discuss the question as to the differences between the corpus luteum of simple menstruation and that of conception. In the cow and sow the corpora lutea of the non-pregnant are altogether similar to those of the pregnant, and he has made the same observation in the bitch, the cat, and the porpoise. They disappear more quickly when no conception follows. In the human female, at the earliest period of the bursting of the follicle, the filling of it with blood, and the beginning of the development of the membrane of the follicle, to the formation of the corpus luteum, there is no difference at all. But in the further development of the corpus luteum, the impregnation of the ovum and gestation bring about a material difference. The corpus luteum in simple menstruation never attains the full stage of formation up to the complete filling up of the follicle and the metamorphosis of the blood coagulum; but this substance only developes itself into a peripheral layer, and soon falls into retrogressive metamorphosis. It shrivels up, and only leaves at the next and the succeeding menstruation a more and more indistinct spot, changing from yellow to brown and black, and soon there remains nothing but a scar; which lasts for a time, and gives evidence of the past process which has at an earlier period taken place on the surface of the ovary. The corpus luteum of conception, on the other hand, goes on developing itself throughout the first months of pregnancy,

and attains a fullness of size, colour, and texture, which the menstrual corpora lutea never reach. It lasts throughout the whole period of pregnancy, and disappears after delivery. It may, however, be questioned whether it has a great diagnostic value. In the first period, so long as there are no other signs of pregnancy, these differences either do not exist, or are very difficult to determine. After delivery, when the signs of pregnancy in the uterus have disappeared, it again becomes difficult to distinguish them from the corpora lutea of fourteen days or three weeks' standing, resulting from menstruation. And where pregnancy is plain, from the state of the uterus and other parts, the corpus luteum is of no value. Prof. Bischoff, therefore, concludes that the corpus luteum cannot be used in the determination *of doubtful cases.*

Professor Bischoff holds it to be proved that conception and pregnancy depend absolutely upon menstruation as the period of the ripening and expulsion of an ovum. He remarks, however, that it can scarcely be doubted that the time occupied by the transit of the ovum from the ovary, the arrest of the ovum, and the preparatory changes in the uterine mucous membrane, suffer great differences in individuals, and hence entail a longer or shorter duration of gestation.—[*Henle's Zeitschrift, and Monthly Jour. Med. Science.*

The Entrance of the Spermatozoon into the Ovum. By M. KEBER.

By the diligence of embryologists, the science of development continues to make wonderful advances. Martin Barry and Nelson had already published observations of the entrance of the spermatozoon into the ovulum; but their observations were not regarded as completely satisfactory, till Keber, following in their footseps, by a careful observation of the process as it takes place in the fresh water mussel, made out and described the different stages of this wonderful function. Since Keber's work appeared, M. Bischoff has been twice in the press; first of all, with a pamphlet controverting the views of Keber, and then with one fully confirming the same views. Bischoff also takes occasion to make some amends to Martin Barry, whose uncommon accuracy and profound research he has occasionally failed to recognize, till forced by overpowering evidence.

In the fresh water mussel (*unio*), at the time of conception, the ovulum, although still small, projects at one part a minute process which springs from the membrane of the albumen, and perforates the cortical membrane. This process dehisces, lets escape a little albumen, and admits one of the spermatozoa which surround it. This done, the micropyle, as it is called, again closes by constriction or obliteration.

Afterwards (and sometimes earlier) there is formed near the micropyle an adhesion between the membranes of the albumen

and of the yelk, then the yelk-bag dehisces, receives the spermatozoon into its interior and again is closed.

The spermatozoon afterwards sinks deep into the yelk, swells and becomes rounded; after some time a nucleus appears in it, while its outer membrane thins, and at length disappears.

The nucleus of the spermatozoon splits up into several irregular divisions which at first lie near one another, and then become diffused through the yelk, so that before the dissolution of the germinal vesicle the yelk is filled with particles derived from the male.

M. Keber has also confirmed the observations of Barry in regard to the small pellucid vesicles not rarely found in the abdominal cavity of the rabbit, attached to the ovary, the fimbriæ, the oviduct, the peritonæum, or the uterus itself; within which are observed vibratory motions over the whole surface and rotary movements of various corpuscles, and of a large mulberry-like body on its axis, which increases under the eye of the observer by the apposition to it of roundish corpuscles, from the fluid of the vesicle.

Barry observed a similar vesicle imbedded in the mucous membrane of the uterus. Those found in this situation, are smaller than those of the abdominal cavity. In these bodies Keber has observed changes resembling the formation of the micropyle in the ovulum, and for that and other reasons regards these vesicles as ova. But for farther discussion of this subject we refer the reader to Keber's monograph.—[*Edinburgh Med. and Surg. Journal.*

On the Use of Nitric Acid in Hemorrhoids. By Henry Smith, F. R. C. S.

Several years have now elapsed since the attention of surgeons was directed by Dr. Houston to the improved treatment of certain forms of piles by the application of nitric acid, and since the introduction of this plan, it has doubtless been employed by many in the profession; but it seems to be necessary even now to direct further attention to this matter. Most of us may be acquainted with the fact of a certain improved mode of treatment, or a certain remedy having been recommended and brought into the category of surgical means and appliances; but this may be all; for many of us either have no faith in it, or are too much wedded to the use of those other methods which have been adopted by our teachers and by the previous generations of surgeons.

These remarks may, I believe, be truly applied to the subject under present notice. The great advantages of nitric acid in the treatment of some forms of hæmorrhoidal tumors are not yet sufficiently known and acknowledged; and, having had numerous opportunities of observing them, I deem it right to give the results of some of this experience, and to make some observation thereon.

In many cases of hemorrhoids, the distress caused by them, per-

haps for years, has been such, that many patients are induced to undergo operations of considerable severity for the purpose of getting cured. Ligature of the offending part and excision have been the measures to which surgeons have for the most part resorted.

When the hemorrhoids are situated within the sphincter ani, excision is a dangerous remedy. It is true that in many cases the scissors may be used without much bleeding, and a good cure will result; but every now and then such extensive hæmorrhage will follow as to place the life of the patient in jeopardy. I have myself been called to two such instances. In the one case of a young gentleman, some internal piles had been cut off by another surgeon. Three hours after the operation I was called to the patient, and found that he had bled enormously; in truth, his life had been seriously periled.

In the second case, the patient was a middle aged female, on whom I had performed a somewhat complicated operation for the relief of a prolapsed rectum, conjoined with excessively painful piles. I snipped off the most prominent part of the swelling which was protruding externally, and after having returned the parts within the sphincter, and perceiving no bleeding, left the patient, but in about a quarter of an hour she suddenly had an inclination to stool, and passed an immense quantity of blood. This occurred two or three times, and when I saw her she was in a very exhausted and restless state; but I managed to stop the bleeding, and she happily recovered. In this instance I doubtless used the scissors more freely than was proper.

It may be stated as a rule, with but few exceptions, that the scissors or knife should be limited to those excrescences, vascular or otherwise, which are situated external to the sphincter; where there is a prominent swelling, with a more or less narrow neck growing from the verge of the anus; where there is simply an enlarged and distended vein containing a coagulum of blood; and especially where, with a relaxed and hæmorrhoidal condition of the rectum, there is a redundancy of loose skin around the anus—in such latter case the propriety of using the scissors is very obvious.

Ligature of internal piles or of portions of a relaxed state of the rectum is an operation which is chiefly in favor among surgeons, and its use is attended with most signal benefit; and, if it were invariably adopted without producing dangerous or fatal symptoms, it would not be expedient to discard the employment of such a remedy: for, in general, but one operation is required, and, if this be properly effected, the benefit will be speedy and lasting; but the advantages of the ligature are, to a certain extent, counterbalanced by certain evil results which are likely to follow its use. In the first place, the patient must be confined to his bed or sofa for some days. Secondly, the application of the ligature is sometimes followed by the most intense pain. Thirdly, symptoms

of an alarming and dangerous character may be produced; and, fourthly, death itself may, and does occasionally follow its use.

I have had no personal experience of a fatal event after the use of the ligature: but I know of one instance in the practice of a friend where death did ensue after an operation, and, during a recent discussion at the London Medical Society, Mr. Henry Lee, who has paid much attention to this subject, stated that he had examined two individuals where death had been produced by the ligature. In one instance of a gentleman—a most valuable life—who had had a ligature applied for the cure of a bad prolapsus, most alarming peritoneal symptoms came on, so that I was obliged to watch him most carefully for some time after the operation; and in others I have seen very severe pain and distress produced,—retention of urine is by no means an uncommon sequela.

Under these circumstances it is desirable to employ an agent which may effect the same good purpose without the attendant evil results; and, in many instances, this may obtain in the use of nitric acid. It would be absurd to attempt to discard the use of the ligature in all; for, where there is considerable prolapsus of the rectum, or where the hæmorrhoidal tumors are large and have extensive bases, it will be necessary to resort to the use of the ligature: but, in a great majority of instances of internal piles and of prolapsed condition of the rectum dependent upon the unhealthy and vascular state of the mucous membrane, nitric acid will be found to effect a cure; and this, too, without causing any of those painful and distressing symptoms which occasionally follow the use of the ligature. It has occurred to me to have many opportunities of employing it, and I have seen most excellent results from it. I will briefly relate a few of the most striking cases.

In May last, I was requested to see Mr. F., a gentleman who had just returned from Australia, in company with his medical attendant, who told me that he had suffered for several years with distressing protrusion of the rectum after going to stool, and that he was most anxious to get cured, and would undergo any operation.

On examination, I discovered that there was a highly congested and relaxed state of the whole mucous membrane of the rectum, and just within the sphincter a vascular broad mass, which might or might not have been termed a pile. However, the pain after going to stool was always most excessive as the mucous membrane prolapsed. In addition, there was an external hæmorrhoidal excrescence attached to the verge of the anus. I consulted with the surgeon in attendance, who had not even heard of the use of nitric acid before he came to England, and it was determined to apply it freely to the whole congested and relaxed portions of the rectum.

The patient was very anxious that only one operation should be done; therefore the very strongest acid was applied with freedom, and the external pile was cut off.

It was not necessary to apply it again. Great pain was produced by the acid, lasting some time, but when his bowels were first moved after the operation there was not any prolapsus, and in a few days he had lost all trace of a complaint which had for years embittered his life.

While this patient was under my care, Mr. T., a gentleman aged sixty-five, consulted me about his piles. He had suffered for more than twenty years, and had consulted various practitioners, and had used a quantity of remedies. The last person he consulted was an homœopath, who took the fees of the old man with an unsparing hand, but did not even condescend to examine the rectum. He stated that his sufferings had been great for the last twenty years; that the gut came down when he went to stool, which process lasted an indefinite period of time, in consequence of his being compelled to return the protruded part, which at times he assured me had sometimes filled the hollow of his hand. In addition to this the gut generally prolapsed when he went out for a walk, and at times the hemorrhage had been such, that, after leaving his house for a walk, he had been compelled to return hastily to change his drawers.

On examination, I found a collection of very vascular and strawberry-colored piles within the sphincter, and a protrusion of the mucous membrane of the rectum. Around the anus was a large quantity of relaxed and thickened integument. It was just the case which was adapted for the treatment by nitric acid, the action of which I explained to the patient, who readily consented to its use.

On the following day, his bowels having been cleared out, and the mucous membrane being protruded as much as possible by the use of warm vapor, I applied nitric acid lightly to the largest pile. The effect of this was only to give pain for a few moments, and, after a few days, there was decided relief, when the acid was repeated to others of the tumors. The same treatment was carried on until I had applied it on five different occasions, when, with scarcely giving the patient any amount of pain, all the excrecences were nearly destroyed. The loose and redundant skin around the anus was then removed, and in a few days the patient came to me full of gratitude, stating that he had no further trouble, and that he had not been in such comfort for twenty years.

In the first of these cases the cure was more rapid and decided than I could have expected, as it was not one for which the nitric acid treatment is so well adapted, the disease consisting mainly of a highly congested state of the veins of the rectum, the hemorrhoidal tumor itself being of a deep blue color. It is in the instances like the second, where the tumors are defined, very vascular, and of a bright red color resembling a strawberry, that the nitric acid is so particularly useful.

But it is in cases where there is a great deal of bleeding that it acts so well; in the second, there had been most copious hemor-

rhage, from time to time, but this had been checked before the patient consulted me, and therefore it would not be fair to give the acid the credit of curing this as well as other symptoms, because it did not exist at that precise period of time; but cases have occurred to me in which I have seen remarkable effects produced as regards arrest of bleeding. The last case treated by me was an instance of this. It occurred only a few weeks ago, in the person of an elderly woman, who came to me complaining of profuse bleeding from the rectum, which had been going on for several days. Her countenance betokened loss of blood. On examination, I discovered, just within the sphincter, a large, vascular, bright red pile. I touched it lightly with nitric acid; this had the effect of restraining the hemorrhage, and after three other applications she was cured.

If the remedy is thoroughly applied, and the accessory treatment properly pursued, the cure will be lasting, a striking instance of which was presented to my notice a few weeks ago, in the person of an officer in the Navy, who was under my care in 1850 for the treatment of very bad piles, from which he had suffered greatly many years, he having been employed on active service in a hot climate. Here there were several piles internally, and a large redundancy of loose skin externally. Nitric acid was applied three or four times to the former, and the loose skin was cut away; a good cure resulted. I saw this gentleman the other day on his return from active service abroad, and he tells me he is quite well.

In many instances of long standing hemorrhoids, the external skin becomes so thickened and relaxed that there will be a necessity of snipping it all away if a perfect cure be expected. The contraction which takes place subsequently to the operation braces up the parts and prevents any further protrusion of the gut which might subsequently take place.

The acid should be quite pure, and should be applied by means of a stick of wood. The parts should be well oiled afterwards. It is very important to attend to one thing, namely, to wipe the part to which the acid is to be applied carefully with a piece of lint, in order to get rid of the mucus which covers the piles, and which will prevent the proper action of the acid.—[*London Lancet.*

An Analysis of the Symptoms of twenty-one cases of Meningitis in the adult. By J. Lewis Smith, M. D., Physician to the Northwestern Dispensary, New York.

Perhaps there is no inflammatory disease so vaguely written upon, or so little understood, as inflammation of the arachnoid and pia mater. This arises chiefly from the fact that this inflammation usually coexists with that of the dura mater, or cerebral substance, or with disease elsewhere, modifying and obscuring its symptoms, and, perhaps, changing its course.

My purpose, in this paper, is to determine whether the books give a correct account of this disease, and to this end I have collated, as far as possible, records of primary meningitis, and secondary, where the primary disease seemed so mild as not to produce any material modification in the patient's condition.

My investigations have been restricted to adults, from the reflection that in them the symptoms may be different from those in childhood; and in order to avoid those numerous cases of acute hydrocephalus, which is especially a disease of early life.

The whole number in my collection is only twenty-one, as, for various reasons, I have rejected most of the recorded cases of this disease. Of those published in Abercrombie's celebrated treatise, I employ only one; the rest, with the exception of a lady, in whom the disease was combined with inflammation of the ear, being either children, or else showing, after death, merely a vascular condition of the membranes. Vascularity, with or without serous effusion, may indicate, it seems to me, simply a state of congestion; and I find that Dr. Watson, of London, objects to these cases of Abercrombie, on this ground.

The French writers, as Andral, give minute records of meningitis, but most of the cases published by them present such complications, that I have not dared to use them.

Records where the patients recovered, and several such are found in the journals, have also been rejected, in the belief that we cannot yet make a positive diagnosis of meningeal inflammation from the symptoms. Only such cases have been employed as showed after death a lymphy deposit on or under the membranes.

Before proceeding to the analysis, a word should be said of the so-called cerebro-spinal meningitis, an epidemic disease, which has prevailed in various parts of Europe, as Gibraltar and Strasburg, and in our own country. The pathology of this disease is not yet understood,—some considering it a local, others a constitutional affection; and there has been a corresponding discrepancy in the treatment. Whatever may be its nature, it is evidently very distinct from the sporadic inflammation, and cannot properly be considered with it.

In nine of the twenty-one cases, the cause of the disease was not apparent. Perhaps, in some of these, a more minute autopsy would have discovered a morbid process, to which the inflammation was secondary; for the best pathologists agree that secondary meningitis is more common than primary. If, in any of them, such disease were present, it was no doubt mild, to have escaped detection. Five had tubercles in the membranes, in the midst of the inflamed surface, and in four there were tubercles in the lungs, and not elsewhere. Meningeal inflammation has been frequently noticed to accompany phthisis; and as post mortem examinations often reveal the inflammation, without the presence of tubercles to excite it, the tubercular *diathesis* has been properly called the cause of the meningeal disease. When tubercles are found on the

membranes, they, no doubt, in some instances are deposited during the inflammation, just as pneumonia may cause the first tubercular deposition to take place in the central or lower part of the lung, instead of its usual seat, the apex.

In one case, the meningitis seemed to arise from erysipelas of the neck and scalp, in one from intemperance, and in one from reaction after profuse hemorrhage. From the records, it does not appear that the primary and secondary forms differed in any important particular. On the average, the symptoms, both in kind and intensity, seem to have been about the same.

Determining the duration of the disease has been somewhat difficult; but dating from the commencement of well-marked cerebral symptoms, as headaches or delirium, I find, in fifteen cases, the period to vary from one to thirty-three days, with an average of fifteen. In one other case, the time seems pretty accurately fixed at three and a half months, including an interval of improvement.

Symptoms.—Headache was one of the most common, generally severe, but sometimes slight. It is recorded in fourteen cases, in all of which it began the first day, and continued till the patients sank into delirium or coma. In no case is its absence recorded.

One only had convulsions. This man was a soldier in the French army at the time of its retreat from Moscow, subsequently to which he was subject to epileptic attacks. An autopsy of all the viscera showed no disease except the meningitis.

How the opinion has become so prevalent, that inflammation of the meninges gives rise to convulsions I do not know, but presume it is because this disease is most common in childhood, and convulsions usually attend this as well as other encephalic diseases in early life. Perhaps English and American physicians have derived their knowledge of diseases of the brain and membranes more from Abercrombie's treatise than any other source; and, as we have said, nearly all the cases in his collection were children. He gives the opinion that "the more common form in which the attack takes place, is by a sudden and long continued paroxysm of convulsions," alluding to an attack of meningitis. On the contrary, our analysis clearly shows that convulsions are not a symptom of this disease except in childhood, and this correction should be made in our standard works.

A rigid and flexed state of the upper extremities was present in one case, in one trismus, in another paralysis of one side of the face, in another of an arm, and in four of an entire side.

Delirium was noticed in fourteen cases; in three coming on in the commencement of the disease, in the others not till near the close of life. It is not stated whether the remaining seven were delirious, so that if this symptom were present, it was probably of the passive kind.

Vomiting, so common in the acute hydrocephalus of childhood, occurred in only six cases, and in these, with one exception, not till the disease was well advanced.

The pupil in six cases was dilated during the comatose state, and in two others, before the development of coma, it was contracted, the condition during coma not being mentioned. Besides these, four exhibited some unnatural appearance of the eye, as strabismus, occurring, probably, from effusion. In the remaining cases the condition of this organ is not recorded. In one instance where the pupils were dilated, thirty leeches were applied to the neck, and while the bites were still bleeding contraction took place. This goes to show that simple congestion may cause dilatation, which may not, therefore, be always so grave a symptom as is usually thought.

Retention of urine was present in six cases, and incontinence in one.

The pulse in seven was under eighty till near the close of life. Of these, three were phthisical, two had headache for two years, and one for life, one had had pain for a considerable time in the lumbar region, the cause not being apparent, and in the other the inflammation appeared to be primary. Three had a pulse varying from 80 to 100, two were phthisical, in the other the inflammation was primary. Three had a pulse over 100, of whom two were consumptives. The thought may occur, whether this discrepancy in the condition of the pulse may not have been due to compression from the effused fluid. A compressed state of the brain, will, in many instances, prevent acceleration of the pulse, though the inflammation is intense. But this explanation does not answer, for the symptoms of compression were generally absent till near the close of life. It is better to consider this diversity due to a difference in the grade of inflammation, as is the case in the inflammation of other serous membranes.

The mode of death in sixteen cases is given, in all by coma, varying from a few hours to two or three days. Generally the effusion of serum and lymph seemed sufficient to cause the coma.

The seat of inflammation in seven cases was the base of the brain, in four the convexity of one hemisphere, in three the upper surface of both, and in two the entire meninges. In the remaining cases the seat of disease was not recorded accurately, though the deposit showed undoubted inflammation.

From this analysis the following conclusions may be drawn:—

1st. That a common cause of meningitis is the tubercular diathesis.

2d. That if in any of these cases the inflammation was primary, and not dependent on a diathesis, it did not differ materially from the secondary form either in gravity or duration.

3d. That meningitis usually commences with headache.

4th. That convulsions are not a symptom of it.

5th. That delirium is present in the majority of cases, occasionally early, but generally not till the disease is far advanced.

6th. Vomiting does not occur till a late stage of the inflammation, and then in only a moderate number of cases.

7th. The pulse differs in different cases, and is, therefore, the less reliable as a means of diagnosis.

8th. Paralysis sometimes occurs at a late stage of the disease, but generally there is no contraction or rigidity of the limbs.

9th. That the mode of death is by coma. It is not our object to speak of the treatment, as all the cases were fatal, and in no instance did the remedies differ materially from those recommended in the books.—[*N. Y. Journal of Medicine.*

Intense Cold as a Local Anæsthetic—Removal of Congenital Nævus, etc. By J. Mason Warren, M. D.

The patient was a young man having a congenital nævus, of a black color, and of large size, situated over the inner part of the knee-joint, below the patella. The tumor had remained of about the size of a dollar until within two years; since that time a supplementary tumor had appeared beneath the original, quite hard, extending into the adjacent cellular membrane, and apparently attaching itself to the synovial capsule. The whole tumor was sensitive in the highest degree, and at times so painful as to disable the patient from attending to business; even the contact of his clothes producing suffering. It was difficult to make a satisfactory examination, in consequence of his dread of the necessary manipulations. He was kept in a horizontal posture for a few days, dieted, and an evaporating lotion applied, to prepare him for the operation, which was done in the following manner. Excision being objectionable on account of the relations of the tumor to the surrounding organs, equal parts of pounded ice and salt were enclosed in a small gauze bag, and applied to the tumor for four minutes, when the whole of it became congealed and of a white color, crackling under the touch. A narrow-bladed knife was then introduced beneath the skin, and the tumor freely cut up in every direction. The operation was entirely painless; the patient sitting up, and watching its progress with much interest, although previously shrinking on the mere approach of the fingers to the part. The above subcutaneous operation was repeated once or twice, and resulted in the absorption of a large part of the tumor, and entire relief from the morbid sensibility.

In a case of fascial paronychia, in which Dr. W. had recently employed the same method of anæsthesia, the painful incisions necessary to give exit to deep-seated pus were borne without shrinking, and he thought the cure more speedy than under the ordinary treatment. The same fact was remarked by the patient, who was a medical man, and an acute observer.

In one or two cases of operation involving vascular tumors, Dr. W. had found it of much service, during the progress of the dissection, to apply the freezing mixture, and thus temporarily arrest the hemorrhage, so as to allow of a more satisfactory prosecution of the subsequent steps of the operation.

In making the incisions in the congealed part, Dr. W. had observed it necessary to be rather more careful to maintain a firm hold of the knife, and to employ more force than in cutting the integument in its natural condition; otherwise the knife would slip off, and make an incision at some point not intended; this is, however, avoided by a little practice.

There are many cases to which the freezing mixture may be applied, but for more elaborate details reference must be made to the publications of Dr. Arnott, and other gentlemen abroad. In Europe this subject is at present attracting great attention, on account of the continued increase of deaths from chloroform.—[*Boston Med. and Surg. Jour.*

On the use of Glycerine as an Internal Remedy. By J. L. CRAWCOUR, M. D., of New Orleans.

I wish to draw attention, particularly at present, to the *special* action of glycerine on the economy, and the perfect safety with which it can be used as an internal remedy. For the past twelve months I have used it in every case of disease where formerly I should have used cod liver oil, and with superior benefit; for while it seems to possess all the remedial virtues of this latter agent, it is its superior in taste, in not disordering the digestion, and in its property of combining with any other remedy.

In several cases of phthisis, of scrofulous disease generally, in mesenteric disease in children, I have used it largely and successfully; and in children, its sweet and agreeable taste gives it a great advantage over cod liver oil, the only agent I can compare it with, in its therapeutic action. In addition to its special anti-strumous property, I find that it materially aids in the assimilation of salts of iron, especially of the iodide, and I now rarely order either iodine, or the iodide of iron, without combining them with glycerine. Quinine also, is soluble in it, without the aid of sulphuric acid, and to some slight extent is divested of its bitterness.

The dose in which I usually administer it is from one to three drachms three times daily, in an ounce of water; in from one to two drachms, it, in a short period, relieves the cough, improves the digestive powers, and appears to increase the fat-producing principle in phthisical patients; in larger doses it has in a few instances produced nausea; it is, however, essentially necessary to its successful employment that it be obtained pure, and this is a matter of some difficulty, for it is ordinarily the result of the preparation of the common lead plaster, and consequently contains traces of lead, but by the process of Dr. Morfit, who decomposes lard, or oil, with hydrate of lime, it can be procured chemically pure, and at a very cheap rate. Should my communication induce other physicians to try it, the purpose of my writing to you will be answered, as it will be an equal boon to the physician and

patient, if a remedy can be discovered equal in properties to cod liver oil and without its nauseous taste and smell.

I have recently tried it as a solvent for phosphorus, which latter we have hitherto hardly been able to use in medicine, as its solution in oil is so nauseous that we can rarely induce patients to swallow it, and its solution in ether is so dangerous that I question whether any physician of ordinary prudence would prescribe it. But in glycerine, it is not only nearly as soluble as in oil, but is miscible with water in all proportions, and is comparatively tasteless and odorless. About two grains dissolve readily in an ounce of boiling glycerine, and from experiments on myself, I consider it a powerful and a valuable stimulant. Of the above solution, which, after the nomenclature of Messrs. Cap and Garot, I would call the glycerole of phosphorus, I took one drachm in a wine-glassful of water, with which it intimately blended; there was hardly any taste or smell, and it did not produce those garlicky eructations said to be the result of the phosphorus in oil. Its effect on my system was that of a stimulant: in about half an hour the pulse became quickened, both at the wrist and at the temples, the cheeks flushed, the skin became warm and suffused with moisture, there was a certain amount of mental excitement, and after a short time there occurred a feeling of oppression at the præcordia, accompanied by palpitation of the heart, while after a certain time the cerebral excitement was followed by a slight feeling of confusion, accompanied by sleeplessness. Each time that it has been taken in this dose, it has, on myself, produced these same effects. I therefore look upon this quantity as excessive, and would suggest that if this remedy be used, it should be in doses ranging from ten to thirty minims. It may be combined with any other drug, and I look upon it as a valuable addition to our list of therapeutic agents; not that the use of phosphorus is new, but hitherto it has been excluded from us from the difficulty of finding a proper solvent—this now, I believe, has been discovered in glycerine.—[*New Orleans Med. News and Hospital Gaz.*

Treatment of Diarrhœa by Chloric Ether. By Geo. B. Mead, Esq.

We often find that many cases of diarrhœa resist all ordinary treatment, opium amongst the rest. In 1846, '7, and '8, an epidemic prevailed at Bradford, Yorkshire, which was attended by a diarrhœa of an intractable nature.

This diarrhœa was combined in many cases with vomiting and spasmodic pain of a very distressing character. We had very little difficulty in treating those cases in which pain was absent, but we found a certain proportion in which the diarrhœa obstinately continued despite the use of a multitude of remedies; and the pains, though temporarily relieved by the use of opium, returned directly the narcotism passed off; the opium suspended,

but did not remove, the spasms. At length we adopted the following formula:

℞. Ætheris chlorici ℥ij.; speciei pro conf. arom. ℥ss.; misturæ cretæ compositæ ad ℥vj. M. Fiat mistura.

The fourth part was directed to be taken directly by an adult, and repeated every half hour, or at still longer intervals, according to the severity of the attack, and its effect upon the patient. Occasionally, opium, either in the solid form or the tincture, added to the mixture, was given; but this was seldom necessary, and I think every case would have recovered without its use. The effect of the ether in every case was marvellous. The spasms and pains were relieved, as if by a charm; the diarrhœa ceased; warmth returned to the extremities; the pulse, before perhaps flagging, increased in force and volume; one bottle never failed to relieve, or two to cure even the worst cases in which all other plans had failed. The relapses were infrequent, and were generally checked at once by a single dose. After the introduction of the chloric ether, we had no further trouble with diarrhœa. The medical man in whose practice this occurred is since dead; otherwise I am sure he would have felt great pleasure in confirming this statement. Often has he expressed to me his high opinion of the efficacy of the ether in cases of diarrhœa combined with spasmodic pain. After this, at the time the cholera last visited this country, I was residing with Dr. Morris, of Spalding. It reached Boston. Great alarm existed in Spalding, and the public were fully aware of the importance of checking the premonitory diarrhœa which began to prevail, and was exceedingly troublesome in many cases to check. Recollecting the ether, I ventured to suggest its use. My friend acquiesced. It was tried, and in not one case failed. As at Bradford, hundreds of cases in which alarming cramps existed were cured like magic; none ran on into Asiatic cholera, though many appeared to be on the verge of it, or, at any rate, were equal to those of English cholera of the severest character. So prevalent was the diarrhœa, that the surgery was thronged from morning to night by applicants for medicine; the policemen in the streets, sailors in the vessels on the river, travellers upon the rail, were equally affected: the cause was evidently ubiquitous, whatever it might be.

At last, one morning early, I was summoned in haste to a patient, an old woman, residing in one of the most unhealthy localities in Spalding. I found her presenting unmistakable signs of labouring under Asiatic cholera in an advanced stage; she was blue, almost pulseless, and the cramps were of a violent character. I had seen English cholera in its worst and most fatal forms, but never aught like this. I have a vivid recollection of the scene, and remember well I stood as it were aghast at the sight of her agonies. Having directed her attendants how to act, I instantly returned home, and sent a mixture, increasing the dose of ether, but with very little hope of success. I ordered it to be given at

very short intervals, and, in the course of an hour or two, saw her again, in company with my friend. We were delighted and surprised to find her greatly improved. We continued the remedies, and by the evening she was out of danger. Symptoms of relapse appeared several times during the next day or two, but were at once checked by the use of the remedy. The patient, though advanced in years and greatly debilitated, having led a somewhat irregular life, completely recovered, and died about a year afterwards, of a totally different complaint. The remedy obtained quite a notoriety in that locality; to such an extent was it used, that we were told by an extensive wholesale druggist he had sold more to us than to all the rest of his connexion put together.

A gentleman travelling by the Great Northern Railway was attacked by severe diarrhœa. He got out at Spalding, and consulted Dr. Morris, who prescribed this remedy; it at once relieved him. In conversation, he mentioned to him how valuable he had found it in the treatment of diarrhœa. On his return home, the gentleman told his usual medical man of the circumstance; and he, in consequence, was induced to try it, with great success.

In 1850 and 1851, I was again residing in Yorkshire, and there saw much diarrhœa. I used the ether extensively, and never found any case in which it was properly administered where it failed; indeed, I recollect some equally striking cases with those I have enumerated, in which it might indeed be said to have acted like a charm. I could refer to many of my medical friends who have used it upon my recommendation, and whose experience, after numerous trials, has strongly corroborated my own. Though I have used it in at least fifteen hundred cases myself, and indeed I think not improbably three thousand cases, I have never yet found it fail.—[*Association Med. Jour.*, and *Braithwaite's Retrosp.*

On some Remedies for Stomach Diseases. By Dr. Geo. Budd, F.R.S., Professor of Medicine in King's College.

In his 8th lecture on disorders of the stomach, Dr. Budd makes some useful remarks on the use of the mineral acids in various kinds of indigestion. But these have been so well treated of by Dr. Prout and others, that we will here only give Dr. Budd's remarks on *vegetable bitters*.

Quinine, and the bitters generally, are especially grateful to persons who have injured their stomachs by hard drinking. With such persons they improve the appetite and strengthen digestion, and have a bracing effect upon the system at large.

In persons exhausted by over-work, or wherever weakness of the stomach is the result of general debility from other causes, they often do much good in the same way—*by improving the appetite* and strengthening the digestion.

They do harm in the organic diseases of the stomach; in plethoric states of the system; and generally where there is a furred

tongue, or where the urine throws down a sediment of lithic acid, or of lithate of ammonia. Their most striking effect is, to improve the appetite, when this has been impaired from hard drinking, or from over-work, or from nervous exhaustion from other causes; and the best time for giving them is from half an hour to an hour before meals.

The different bitters have not precisely the same effect. Calumba has a sedative influence not possessed by the others, and probably on this account has had a wider reputation as a remedy for mere indigestion. Gentian and chiretta (which is of the gentian tribe, and is much employed by practitioners in India) tend to increase the secretion of the liver, or, at any rate, do not impede the secretion of the liver, which quinine and quassia seem often to do. They are, therefore, better suited to bilious persons, and to those cases of indigestion where the secretions of the liver are defective.

The different preparations of steel are especially useful in the indigestion that occurs in chlorosis, and generally where weakness of the stomach results from anæmia.

They do harm in plethoric states of the system, and generally where there is a furred tongue, or where the urine throws down a sediment of lithate of ammonia or of lithic acid.

The citrate, or ammonio-citrate, is the most agreeable preparation to the taste, and generally the most grateful to the stomach. If there be any disposition to sickness or nausea, or any tendency to furring of the tongue, it may be given in conjunction with the bicarbonate of soda or potash. This makes a mixture having much the same effect as Griffith's mixture,—the mistura ferri composita,—and far more agreeable.

The muriated tincture of iron is more astringent than the other preparations, and may be given in conjunction with dilute muriatic acid, in the forms of indigestion suited to this latter medicine, when these exist in states of anæmia.

The sulphate of iron, like other metalic sulphates, has a tendency to cause sickness, and should not be given in cases where a disposition to sickness exists.

Steel medicines do good by improving the quality of the blood rather than by their immediate action on the coats of the stomach, and are best given at meal-times. They then are mixed with the food, and gradually absorbed with the products of digestion, and are less apt to offend the stomach and to cause headache than at other times.

Whenever steel medicines are given, it is essential that a regular action of the bowels be kept up. These medicines tend to confine the bowels and to cause evolution of sulphuretted hydrogen in them; and unless this tendency be counteracted, they are apt to fur the tongue and cause headache.

The choice of purgatives is a very important matter in stomach disorders. The different purgatives exert their chief action on dif-

ferent portions of the intestinal canal: some excite the secretion or the peristaltic movement of one part, some of another. In disorders of the stomach and bowels, where a purgative is required, care should, therefore, be taken to select those which are least prone to irritate the injured or disordered part.

Castor-oil, for example, offends the stomach, but acts very mildly on the large intestine. It should not be used in stomach disorders, or where, from any cause, a tendency to vomiting exists; but is better than any other purgative in dysentery, or during convalescence from typhoid fever, when the intestines are ulcerated, and in various other conditions where a speedy and sure purgative, and one not apt to irritate the large intestine, is required.

Senna acts chiefly on the small intestine, and, besides exciting its peristaltic action, increases the secretion from its mucous membrane. It acts, also, on the liver, increasing the secretion of bile. In conjunction with a few grains of calomel or blue-pill, it is, as every one knows, one of the best purgatives in bilious states of the system, or where an evacuant is required; but in mere disorders of the stomach, it is often objectionable, from the tendency it has to cause sickness.

The best purgatives in stomach disorders are aloes and colocynth, which exert their chief action on the large intestine. These medicines may do much harm when the large intestine is ulcerated or inflamed; but in simple ulcer of the stomach, and in the most severe functional disorders of the stomach, they may generally be given without causing either pain of the stomach or sickness. In some kinds of functional disorder of the stomach, aloes seem, indeed, like other bitters, to improve the appetite and strengthen digestion.

Aloes appear to act more exclusively on the large intestine, and irritate the stomach less than colocynth, and hence, in stomach disorders are generally preferable to it.

Where, from the existence of piles, or from pregnancy, or some other condition, these medicines are objectionable, the best substitutes for them in stomach disorders are the saline purgatives, which exert their chief action on the small intestine, and have little tendency to cause pain in the stomach or sickness.—[*Med. Times and Gazette*, and *Ibid.*

On the Use of Chloroform in Tetanus.

In the 'Medical Times and Gazette' will be found a very interesting series of reports of cases of tetanus, forty-three in number, of which eleven recovered. The editor makes some good remarks on the use of chloroform as follows:

The following propositions appear to be warranted respecting it:—

1. That, in the great majority of cases, inhalation of chloroform may be practised with safety as regards immediate consequences.

2. That it is always effectual in allaying spasm for the time.

3. That it exerts, however, no preventive influence whatever, the spasms usually returning, with even increase of severity, very shortly after its suspension.

4. That its continuous administration over long periods of time is not to be recommended, since the patients sink at least as fast, if not faster, than when the disease is allowed to display itself.

5. That it is of great benefit in certain protracted cases simply as an alleviant of the pain. In some of these it will procure rest for periods often of an hour or more after the suspension of the inhalation, and acts altogether much more favourably than in the earlier stages.

6. That, in certain protracted cases, it is of the greatest use in enabling a patient, while in a state of half-insensibility, to take food, who would otherwise be unable to swallow.

7. That, excepting for the two last-named purposes, its use does not seem to be attended by any commensurate benefit, while it may much interfere with the action of other remedies, and, very possibly, be actively injurious itself.

These conclusions must be understood to apply only to chloroform inhalation, since, from the cases published, there appears reason to believe that the results of that of ether have been more favourable. As, however, the latter agent has not been, of late years, used in London, we have no means of judging as to the proportion of cases in which it did not relieve, or whether in any it appeared injurious.

It may be worth a thought whether the employment of anæsthetic vapours *externally* in cases of tetanus might not promise some benefit. The spasms are for the most part reflex, and excited by peripheral irritants. A bath of vapour might be easily given by covering the bed with an impervious material, and exposing beneath the clothes a sponge saturated with ether. The patient's head should of course be left out, and the clothes well tucked in round the neck.

These cases show the relative value of other modes of treatment. Two cases recovered under the use of belladonna: two cases showed the uselessness of tracheotomy: one recovered during the exhibition of sesquioxide of iron and Dover's powder. In several cases Indian hemp seemed useful. In one case nicotine controlled the spasm and repressed constitutional disturbance. On the whole, vegetable sedatives seemed most beneficial.—[*Medical Times and Gazette*, and *Ibid.*

An Example of the Concurrent Development of Cancer and Tubercle. By Septimus Wm. Sibley, Esq., Registrar to the Middlesex Hospital.

There has been a good deal of interest excited of late by the opinion that cancer and tubercle could not co-exist in the same

subject at the same time. We have seen several cases reported which made this opinion doubtful, but the following seems conclusive. It may, however, be true, generally, that tubercle and cancer do not co-exist, but it is evident that there are exceptions.

This was the case of a woman, aged 48, admitted into the Middlesex Hospital, with a sloughing cancerous sore in the left breast; there was a hard tumour on the inner side of the size of an orange, and several small nodules of cancer at its edges. In the course of five days after her admission nearly the whole of the remaining portion of the tumour sloughed away, leaving a clean looking surface, which immediately began to cicatrize. Subsequently, pulmonary symptoms became developed, profuse expectoration followed, and she sank and died three months after her admission. On making a section of the structure of the left breast, it was seen to be an extremely dense form of infiltrating scirrhus, traces of breast tissue, such as ducts, being very apparent. In the thorax, large masses of tuberculous lung tissue were observed. Tubercular cavities existed in the apices of both lungs; a part of the lower lobe of the right lung was in a state of grey hepatization, and the bronchial tubes were thickened and dilated. In the left pleura were numerous crude tubercles. On examining the dates of this case, positive proof was obtained that a cancerous tumour was increasing in the breast simultaneously with the increasing of tubercular disease of the lungs, and that for a period of at least six weeks. The author thought that a single instance of the concurrent existence of these diseases was sufficient to destroy the doctrine of the absolute incompatibility of tubercle and cancer with each other.—[*Lancet*, and *Ibid.*

On Hæmatemesis. By CHARLES NEATE, Esq., Uttoxeter.

'In a case of hæmatemesis which resisted the usual remedies of acetate of lead and opium, sulphuric acid, turpentine, &c., Mr. Neate was successful, as follows:

I was now induced to try ergot of rye, and commenced by giving him a drachm and a half of the powder, divided into eight doses; one to be taken every four hours; and to omit the other medicines.

15th. Better; has vomited no more blood since taking the second dose.

16th and 17th. Very much improved; no return of blood, except in expectoration, which is rather sanguineous. To continue ergot.

20th. All the distressing symptoms have entirely disappeared, and there is no tinge of blood whatever in expectoration; indeed, from this time he very rapidly convalesced, and, with the assistance of wine and nutritious diet, gradually recovered strength, and is now able to do light work.

Remarks.—Now, in this case the ergot has shown itself as possessing considerable virtues, and evidently of an entirely specific nature. At any rate there is one recommendation to its use, that it is neither an excitant nor a stimulant.—[*Ibid.*

Upon the Cicatrization of recent Wounds produced by Caustic. By Dr. GIROUARD.

Dr. Girouard, of Chartres, read before the Association Médicale d'Eure et Loire, Feb. 27, 1854, an interesting essay, purporting to show in what manner recent wounds produced by caustic, healed, and how unseemly or inconvenient cicatrices might be prevented. Old wounds do not pursue quite the same course as recent ones.

After the application of caustic (Vienna paste, &c.) to the integument of a thin subject, the edges of the wound, when burnt perpendicularly from the surface, become thinner from the very day of the separation of the eschar; the day following they form an inclined plane; and a ring of granulations, one line wide and of deeper red colour than elsewhere, forms a zone on the free margin of the wound. On the fourth day the zone becomes narrower and whitens, and forms a cicatrisial membrane; then a new red zone is developed within the preceding, and thus the wound becomes smaller from day to day. In fat subjects, in whom the areolar tissue is charged with adipose matter, the edges of a similar wound undergo but little or no thinning; they round themselves; the adipose membrane swells, becomes covered by granulations; the zone then forms, and, rising to the surface of the wound, pursues the same course as above described. When the edges of the wound are so burnt or cut as to be oblique, the cicatrisial zone pervades, it is true, all the phases of the work of healing, but the skin, loosely connected to the subjacent parts, is dragged towards the centre of the wound. The cicatrix becomes in time condensed and contracted.

The daily diminution of the size of the wound always corresponds with the white of the zone—namely, two to three millimetres, or one line to a line and a half. Centres of cicatrization occur only in old wounds.

By constantly destroying with caustic the cicatrisial zone, the process of healing is permanently arrested; and unseemly contractions may be avoided—first, by limiting the cicatrising process to situations where the contracting force of the granulation can exercise no inconvenience; secondly, in so arranging the shape of a wound that the extremities of the cicatrisial radii terminate in very loose and extensile tissues; thirdly, in so shaping the edges of the wound that the contracting forces neutralize one another. The Mayor of Ponthevrard had on the lip a cancerous growth, which was removed by caustic. The eschar separated on the eighth day. By means of escharotics, the cicatrisial zone was

continually destroyed along the line of wound corresponding with the external integument: the mucous membrane was, then, the part furnishing the cicatrisial granulations; and as contraction was confined to that side of the wound, the mucous membrane was drawn outwards, so as to form a very perfect lip.—[*British and Foreign Medico-Chirurgical Review.*

Live Birth at Four Months.

Mrs. R. menstruated on the 8th February, and quickened 8th June. On the 17th June a fœtus was expelled, which weighed exactly nine and a half ounces, and measured eight inches in length; its placenta weighed six ounces. The eyelids were adherent, the nose and mouth closed, the membrana pupillaris entire. The lungs, in colour and volume resembled those of an early fœtus, and, with the exception of one or two ecchymosed spots, no colour or other evidences of developed air-cells were noticed, all the appearances indicating that no air whatever had reached the tissue of the lungs.

The pulsations of cord, which were vigorous, were allowed to continue for some time, in order that the reflex movements of the limbs, face, and respiratory muscles might be observed. On touching the hands or feet, or blowing upon the face, a convulsive movement of the limbs or respiratory muscles followed. When the pulsations of the cord had fallen to ninety beats, it was divided, and about a drachm of blood suffered to escape; the heart's action immediately became quicker, and one or two thoracic convulsions followed. The reflex movements gradually became more feeble, and ceased in about an hour.

Dr. Keiller, who related this case to the Edinburgh Obstetrical Society, pointed out the medico-legal relations of this case. They are obviously important.—[*Edinburgh Monthly Journal.*

MISCELLANY.

Saccharized Alcoholic Extract of Ipecacuanha.—Mr. A. G. Dunn, in the 'New York Journal of Medical Science,' recommends the employment of a saccharated extract of ipecacuanha in preference to the usual preparations of the drug, such as the wine and syrup, which he considers liable to vary in strength; and the powder is, he thinks, objectionable, from its insolubility. The following is the formula for preparing the extract:

Rad. ipecac. ʒiv.; bruise to a coarse powder, and macerate for thirty days in f ʒxvi. of diluted alcohol, shaking it occasionally, then filter and express. Evaporate the tincture thus formed to ʒii. with which mix powdered white sugar ʒviij., and triturate them in a mortar until they become dry.

The extract thus prepared has the peculiar odour and taste of ipecacuan; it is of a brownish yellow colour, and soluble in water, ether, alcohol, mucilage of acacia, and in fact, in all the solutions with which this remedy is

usually combined. The dose required to be exhibited is the same (twice as much) as the genuine powdered root. From its agreeable taste and perfect solubility in fluids, it is much preferred to the other preparations of the drug, by those who have employed it; more especially in prescribing for children, for whom its sweet taste renders it an excellent form for combining with other remedies.—[*Dublin Hospital Gazette.*

Inga: a new Astringent.—This substance enjoys a reputation as an astringent and tonic in some European countries, and also in America. The bark is compact and heavy, and its fracture presents alternate layers of white and red. When chewed it is found to be astringent to the taste, and quickly imparts a red hue to the saliva. It is rich in extractive principles. The alcoholic extract resembles that of rhatany, both in its color and general properties. In America inga is extolled as an astringent tonic in diarrhœa, in gonorrhœa, in hæmoptysis, in incontinence of urine, and in relaxation of the tissues. As an antiseptic its powder has also been used in the same instances as cinchona. Some trials already made in Paris appear to justify its reputation and its claim to take rank in our Materia Medica.—[*Ibid.*

Iodide of Potassium with Ammonia.—An opinion prevails at Guy's Hospital, that the efficiency of the iodide of potassium is very much increased by combining with it the carbonate of ammonia. The proportions we usually observe prescribed are, two to three grains of the iodide with four to five of the ammonia. Dr. Gull, who strongly advocates the combination, explains to his class that he believes the ammonia to act in three ways:—1st. As a gentle stimulus to the stomach, preventing the iodide from disagreeing. 2d. As a diaphoretic, diffusing the blood, and with it the remedy, well through the whole system. 3d. By chemical decomposition, itself being changed into nitric acid, and then by combination with the base of the salt, liberating the iodine in its free form.—[*Med. Times and Gax.*

Epilepsy treated by the Bark of Black Elder Tree.—The emeto-cathartic and hydragogue properties of the second bark of black elder (sambucus nigra), have long been known, and used in various forms of dropsies; but no mention has hitherto been made of the employment of this substance in the treatment of epilepsy. M. Bogetti relates five examples of cure obtained by this remedy alone. In order to prepare it for administration, the branches of the elder, of one or two years, are taken; the grey bark is removed, and the second bark which remains is scraped off. About five ounces of common water, hot or cold, are poured upon two ounces of the bark, and the infusion is allowed to stand forty-eight hours. The infusion, properly strained, should be taken at intervals of a quarter of an hour for certain number of times when the fit is threatening, the patient fasting. It should be resumed every six or eight days.—[*Rev. Thérap.*, and *Ibid.*

The Venom of Serpents.—Dr. J. Gilman arrives at the following conclusions:—1. That the vemon of all serpents acts as a poison in a similar manner. 2. That the venom of some varieties is far more active than that of others. 3. That a variety of the *coluber*, known as the "cotton-mouth," is the most venomous serpemt in Arkansas. 4. That the vemom of serpents destroys all forms of organized life, vegetable as well as animal. 5. That alcohol, if brought into contact with the venom, is, to a certain

extent, an antidote. 6. That serpents do possess the power of fascinating small animals. 7. That the blood of small animals destroyed by the venom of serpents, bears a close resemblance to that of animals destroyed by lightning or hydrocyanic acid: it loses its power of coagulation, and cannot be kept long from putrefaction.—[*St. Louis Med. Journal.*

New Broth for the Sick.—Dr. Thudicum exhibited to the Medical Society of London, Dec. 9th, a new broth for the sick. To prepare this broth, half a pound of the flesh of a recently-killed animal (beef, or the flesh of a fowl) is chopped fine, and well mixed with a pound and an eighth of distilled water, to which four drops of pure muriatic acid, and from a half to a drachm of common salt, have been added. After an hour, the whole is thrown on a common hair sieve, and the fluid is allowed to run off without pressure. The first portion, which is turbid, is poured back, until the fluid runs off quite clear. On to the fleshy residue in the sieve half a pound of distilled water is thrown in small portions. In this way a pound of fluid (cold extract of meat) is obtained, of a red color, and an agreeable taste of broth. The sick are allowed to drink a cupful cold at pleasure. It must not be heated, as it then becomes turbid, and deposits a thick coagulum of animal albumen and hæmatin. The broth possesses great advantages over other preparations of meat, from containing albumen, and being remarkably easy of digestion.—[*London Lancet.*

Dropsy—Diuretic Wine.—M. Grand, phermacien, publishes in the Repertoire de Pharmacie, for June, 1854, the following formula for diuretic wine: sliced bulbs of squill, eight parts; powdered digitalis, eight parts; canella, twelve parts; acetate of potassa, fifteen parts; Madeira wine, five hundred parts. Macerate for eight days and strain. The dose is half an ounce which may be increased to a wine glassful daily.—[*Vir. Med. and Surg. Journal.*

Herpes—Ointment.—Dr. Quintanilla announces in the Bulletin de Medicina, that he has succeeded in curing a large number of obstinate herpetic eruptions by the following ointment: ℞. Of powdered cinnabar, 4 parts; sublimed sulphur, 2 parts; laudanum, 2 parts; fresh butter, 32 parts; with a few drops of essence of mint. The diseased surface should be carefully cleansed with warm soap water thrice daily, and then covered with ointment.—[*Ibid.*

Nitric Acid in Hooping Cough.—Dr. Gibb, in a recent work on this disease, recommends very highly nitric acid given as follows: ℞. acid nitric. dilut. (Lond. Phar.) ʒxij; cardam. co., ʒiij; syrup simplex, ʒiijss; aqua, ʒj. M. Dose, a dessert spoonful every hour or two to a child two years old.

N. Y. Journal of Medicine.

Solidified Milk.—This is made by adding to 112 lbs. of fresh milk, 28 lbs. white sugar, and a teaspoonful of bi-carbonate of soda. It is then evaporated in a water-bath at a moderate temperature, being stirred and agitated all the while, but so moderately as to avoid churning. In three hours it assumes a pasty consistency, and by constant manipulation and warming, it is reduced to a rich, creamy-looking powder. It is then exposed to the air to cool, weighed into parcels of a pound each, and pressed into a brick-shaped tablet, which is covered with tin foil. This will keep

for any length of time, and may be grated and dissolved in water for use, answering all the purposes of ordinary milk, even to the making of butter. Our ships and steamers will find this solidified milk convenient and economical, and it may come into general use in cities. It is particularly convenient for use in sick-rooms and hospitals.—[*Memphis Med. Recorder.*

Tinnitus Aurium.—In cases of this troublesome affection, attended by itching in the meatus, a scanty secretion of wax, and some degree of deafness, we have succeeded in affording relief, by the application of the spirit of nitric ether, a few drops of which may be poured into the ear, or the meatus may be moistened with it, by the use of a little cotton, or lint, on the end of a probe.—[*Ibid.*

Podophyllin.—This active proximate principle is strongly recommended in the Boston Journal, by Dr. Bates, of Otsego, New York, as an alterative and secernent, making it a valuable substitute, in many cases, for mercury. Obstinate and habitual constipation has yielded to the daily use of one-eighth of a grain for one to six months. ℞. Podophyllin, gr. j.; ipecac. pulv., ext. colocynth comp., ää grs. iv.; mucilag. q. s. m. ft. pil. viij. One to be taken every night. ℞. Podophyllin, gr. j.; ipecac. pulv. grs. v.; hyosciami ext., q. s. M. ft. pil. xx. One to be taken every night and morning. ℞. Podophyllin, gr. ss.; sach. alb. pulv., ʒij. M. Divide into 24 to 32 powders. One to be given to an infant every night.—[*Ibid.*

Lactate of Iron with Antispasmodics in some Neuroses.—Dr. Marchiandi has found the following formula very useful in neuroses, dependent upon onanism gastralgia, epilepsy, etc. ℞. Valerianate of zinc ʒij; lactate of iron, ʒiss; ext. belladonna, ʒss; ext. valerian q.s., to make 60 pills; patient takes two for the first two days, and afterwards gradually increases the dose.—[*Ibid.*

Chronic Papular Eruptions.—Dr. Burgess considers them to consist of disorders of the cutaneous nerves, and prescribes, in severe cases of prurigo, strychnia and phosphorus; he has found phosphorated ether, preceded by repeated doses of hyosciamus for a day or two, succeeded in allaying obstinate pruritus, given internally.—[*Ibid.*

Epilepsy.—In a communication to the Medical Times and Gazette, Dr. Sieveking details seven cases of epilepsy treated with the cotyledon umbilicus, and concludes that this medicine seems to possess the power of mitigating this dreadful disease if it is not able to produce a perfect cure. He uses the liq. cotyl. umbil. in drachm doses three times a day, but contends that it is impossible to account for the modus operandi, as its effects on the system are hardly recognizable, though he classes it with digitalis, producing a slightly diuretic and sedative effect.—[*Virginia Medical and Surgical Journal.*

Gangrene of the Lung.—Dr. Bowditch of the Massachusetts General Hospital reports a case of gangrene of the lung cured under his treatment. The patient came in on November 22d and was discharged December 29th. She had all the symptoms of this usually fatal disease, and was treated with the *liquor soda chlorin.*, in ten drop doses, repeated frequently, and anodyne inhalations; a generous diet being superadded.—[*Ibid.*

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ORIGINAL AND ECLECTIC.

ARTICLE XIII.

Two Cases of Aneurism of the Aorta.—Case of Enlargement of the Bronchial Glands, simulating Aortic Disease.—Case of Wound of the Aorta. By JAMES MERCER GREEN, M. D., of Macon, Ga.

Believing that aneurisms of the aorta verified by dissection, are sufficiently rare to justify the publication of the following cases, I have transcribed them from my note-book for insertion in the chirurgical records of the Society. The wet preparations of the two cases are still in my possession.

As the third case narrated is also an unusual disease, and one that causes much anxiety to the patient as well as the medical practitioner, and is moreover difficult to distinguish from disease of the aorta itself, I have thought proper to introduce it in connection with the others; and, as a pendant to the whole, have brought forward a remarkable case of wound of the aorta near the heart, not only not terminating in death, but attended by trifling inconvenience.

1. *Case of Sacculated Aneurism of the Aorta opening into the Œsophagus.*—Olly, a mulatto woman, aged 40, died recently of aneurism of the aorta. When about 15 or 16, she contracted syphilis, and by some accident or mismanagement was salivated so profusely that she was several months in recovering, and ever after remained in delicate health; complaining principally of debility, neuralgic or rheumatic pains in various parts of the body, and of dys-

peptic embarrassment of the stomach. She never became pregnant. I saw her several months preceding her death and found her laboring under the well-marked symptoms of aneurism of the aorta. She had cough; dyspnœa, sometimes amounting to complete orthopnea; dysphagia; a sense of stuffing up in the chest, and pains radiating about the chest in different directions. In addition to these symptoms, there was a decided enlargement, and a strong pulsation, visible to the eye as well as perceptible to the touch, extending on the right of the sternum, from the cartilage of the first to that of the fourth rib. The auscultatory indications were extensive dulness and absence of the natural respiratory murmur at the upper part and to the right of the sternum, and increased loudness and development of the first sound of the heart, diffused over the same region. This cardiac sound was single, not double, and louder than over the cardiac region itself. There were no *bruits* or other stethoscopic phenomena present, though carefully listened for; nor were there any marked differences in the radial pulsations. Her appetite was almost completely abolished at this time. For the purpose of relieving her present sufferings, though with no expectation of doing any permanent good, morphine was freely administered and a large blister applied to the chest in front. After this period her symptoms abated; the sufferings in the chest and the external pulsations of the aneurism diminished considerably; and at the time of her death, though feeble, she was pretty comfortable, having a good appetite, and was able to walk about with facility in the upper story of the house she occupied. Nothing particularly worthy of note occurred during the latter weeks of her life, except that she spat up several pellets of bloody mucus. At the moment the aneurism burst, she was sitting at a window, and was suddenly heard to call for assistance. Her mistress, who had been informed of the probable mode of her death, immediately ran across the yard and up stairs to her room, and found her lying on her back, covered with blood, which still welled from her mouth. One or two thoracic convulsions were observed, but she was already pulseless and unconscious. This occurred about 10 o'clock, A. M., on the 15th of September, 1854.

Necroscopical examination.—Six hours after death, no morbid appearances were noticed in the thorax or abdomen, except the aneurism itself and a certain degree of enlargement of the bronchial glands, and the effusion of a layer of fresh blood around several of these bodies. The heart and large vessels were, with

the upper third of the sternum, carefully removed from the thorax, for more minute examination. In doing so, however, a sacculated extension of the aneurism above the sternum was accidentally cut open. The heart was of natural size, and its cavities and the pulmonary arteries and veins were all of natural size and appearance. The aneurismal dilatation of the aorta commenced at its very origin but about half an inch from that point, suddenly and greatly increased in size, enlarging into a sac capable of holding an ordinary tumblerful of fluid. This enlargement continued as far as the region of the left subclavian, where it suddenly diminished to a size about one and a half again as large as the natural calibre of the aorta, and then tapered down in a fusiform manner for two and a half inches longer. At this point the vessel resumed its natural size, elasticity and appearance. The superior third of the sternum formed the base of an anterior pyramidal extension of the aneurism, the apex being towards the sac, and was attached to it with the greatest strength and tenacity. Connected with this large sacculus were three smaller sacculi, one flat round one, situated behind the upper margin of the sternum and entirely concealed, and connected with the main one by an orifice $\frac{1}{3}$ of an inch in diameter. In this secret pocket of aneurism, the bone was denuded and rough. Originating from the right side by a still smaller orifice, a large thumb-like sacculus extended upwards along the right margin of the sternum an inch above the sterno-clavicular joint. The sternum was denuded in this pocket also; and from the lower edge proceeded another extension, as large as a walnut, down the right margin of the sternum. These different sacculi were separated from the main one by stout diaphragms, in the centre of which were the above mentioned foramina, and were not gradual dilatations from these foramina, but separate cells divided by perforated diaphragms. The walls and duplications of this sternal portion of the aneurism were quite thick and of gutta percha hardness and toughness. The greater portion of the aneurismal sac itself was thin and in some places translucent, and full of conchoidal elevations and depressions. The interior lining was quite smooth and shining, with the exception of being dotted over with a number of not very prominent atheromatous spots. There were no long spicolæ or plates deposited under the membrane. The innominata and left carotid originating from the upper part of the right subclavian, from the dilated portion of the aorta, were perfectly normal in size and appearance. There were no coagula

in any part of the aneurism except the secondary sacculi behind the sternum, all of which were lined with fibrinous layers. Posteriorly, the aneurism, seeking for the fatal outlet, impinged against and compressed the trachea and œsophagus and was strongly united to the latter on its left side. The opening in the aneurism, which was quite round and not larger than a No. 4 catheter, communicated with a small sac in the walls of the œsophagus (½ inch in diameter) which must have existed for a considerable time, as the muscular structure was evidently absorbed. I judged from the appearances that the aneurism must have been restrained from rupture some time, solely by a portion of the mucous membrane as large as the finger nail. The point of rupture into the œsophagus was fully as large as a half dime piece, and a little below the level of the superior margin of the sternum.

2. *Case of Sacculated Aneurism of the Aorta opening into the Œsophagus.*—In this case—the particulars of which I know nothing more than the appearances presented by the heart and the diseased vessel—the man, who was a convict in our State Penitentiary, died suddenly with a copious hemorrhage from the mouth while engaged at his ordinary avocation—that of a harness maker. The heart is considerably hypertrophied and dilated, and the aorta itself unusually large at its origin, though completely filled by the semilunar valves, which are very large and capacious. The aorta itself, a very short distance from its origin, commences to enlarge and immediately dilates into a pretty regularly shaped sac, capable of holding, probably, a quart of fluid before it was contracted by long continued maceration in alcohol. The aneurism reaches its maximum of size in the arched portion of the vessel, where it must be four or five inches from the top of the arch to the opposite part of the sac. From this point it gradually diminishes to the place where the aorta was cut (about twelve inches from the heart, measured over the greater circumference of the sac) and there it is nearly double the natural size. The whole aneurism is so thick with ossific plates and spiculæ, particularly nearer the heart, as not to collapse when laid on the table. In the upper and more distal portions, the ossific plates are intermingled with and replaced by very thick atheromatous scales. There are no lamelated coagula attached to any part of the interior of the aneurismal sac. When the aneurism was connected with the trachea, the latter had evidently formed a portion of its posterior wall for a

length of time, and at one point, as large as a finger nail was considerably eroded, and at another place about an inch above this, the same process had evidently commenced. The œsophagus had apparently been attacked by the aneurism subsequently to the trachea, and pretty much in the same manner as is described in the preceding case, a sac being formed in its walls an inch in perpendicular diameter, but connected with the aneurism by a slit of the same length, instead of a round orifice. There is no evidence of muscular absorption, or that the centrifugal force of the aneurism had been resisted by the mucous membrane, only there being a pretty strong layer of muscular fibre round the point of rupture which is of the size of a goosequill.

The aneurism, though three times as large as the one previously recorded, had formed no connection with the sternum or with any part of the bony walls of the thorax. The arteries which originated from the upper part of the thoracic arc had been shaven off at their origin, but seem to have been very little, if at all, dilated.

I am indebted to my friend Dr. B. A. White, of Milledgeville, for this pathological preparation, but do not know by whom the post-mortem examination was conducted.

REMARKS.—In noting the considerations suggested by the structure of the first of these aneurisms, one is naturally struck with surprise that no marked *bruits* were observed in a case where the fluids had to traverse so many sharp angles and edges, although they were situated at a distance from the main current of the circulation, and the contents there, no doubt, somewhat in a quiescent state. The most prominent consideration though, connected with a study of the sternal portion of this preparation, is, that the sacculated prolongations were apparently the result of an active vital growth, rather than the mere passive dilatation of a diseased vessel yielding to the centrifugal pressure of the cardiac pulsations. From their strength, thickness and toughness, as compared with the resisting power of a healthy aorta, it would seem very improbable that they were the mere result of dilatation. It seems singular that, while nature is erecting impregnable barriers in one direction, she should be actively carrying on the destructive process in another. In these very sacculi, the process of denudation and ulceration of bone had commenced. What is the nature of the influence by which bone is destroyed in aneurismal disease?—can it be the mere passive result of pressure?

3. *Case of Enlargement of the Bronchial Glands, simulating Aneurism of the Aorta.*—In narrating the particulars of the following case, it is proper to mention the principal antecedents of the gentleman's medical history, as throwing more or less light upon the nature of the disease. From the age of ten to twenty-two, he was the subject of frequent attacks of bilious remittent, terminating in one of extraordinary violence and duration, in which the patient, during the progress of his case, seemed to have passed through the entire list of local inflammations that occur in fever. He had, at one period or another of this protracted attack, the symptoms of cerebritis, bronchitis, pleuritis, carditis and gastritis, followed by acute inflammation of the left shoulder joint, with abscesses in the left axilla and under the left clavicle, and an immense phlegmon extending down the back from the left scapula almost to the sacrum. These symptoms were followed by rheumatism of the joints for several months, the whole attack lasting half a year. This dreadful illness seemed to exhaust the liability to fever in his system, but he became very subject to catarrh, principally in the form of pharyngitis and bronchitis, and to chronic rheumatism, of a mild character, in different parts of the system. This led, finally, in his thirty-second year, to the deposition of a small crop of tubercles in the upper lobe of his right lung, indicated by a slight hemorrhage, hectic, *respiration saccadée*, &c. By prompt change of climate, and other judicious means, he recovered pretty well from this condition, when he was attacked, in his thirty-second year, by the following train of symptoms:—Just before retiring to bed one night, he was seized with a marked, but not very severe, feeling of dyspnœa; this wore off in a couple of hours, and the next morning, on rising from bed, he was quite free from it. While actively engaged at his usual avocations, the same day, the sensation returned with such severity, combined with a local sense of pressure behind and below the right sterno-clavicular joint, that he was obliged to go home and assume the recumbent posture. The affection increased, and became so disagreeable that he was confined to bed for several weeks. He described the feeling as a local pressure, compressing the bronchus more particularly, but distending the adjacent parts in every direction. As his case progressed, however, the direction of greatest pressure varied at different times;—at one time, it was upwards, towards the root of the neck—at others, downwards; and then, again, it returned to the right bronchus; and at another period,

still, it would be most remarkable in the supra-sternal fossa. This pressure that he complained of was not continuously the same in degree, but varied very much at different times: it was also almost always diminished in the recumbent posture, and increased in the erect. On turning the head briskly, far around, to the right or left, but particularly the latter, the sensation of a lump, below and behind the right superior angle of the sternum, was more marked, and when not present in other positions became immediately evident, and when developed in this way would remain present some time. He had a very notable degree of dysphagia, the bolus of food being evidently impeded in passing the point of greatest pressure; but he remarked, always, that he always felt better after swallowing several times in succession, and he frequently ate an apple, or something of that kind, merely for that purpose. He also suffered a good deal from pains, radiating about in different directions from the diseased point, principally up the right side of the neck, and downwards, from the axilla, and occasionally along the inner side of the right arm. At one time, when the pressure was at its greatest height, he had a very evident degree of cerebral congestion, and this when he was lying down. There were no congested veins or œdema perceptible about the neck, face, arms, or any other part of the body, nor any external glandular enlargements. On carefully examining the radial pulsations, no difference could be detected. There were no modifications of the sounds given out upon auscultation or percussion, save the previously existing interrupted or *saccadée* respiration.

The treatment—directed on the supposition that it was a small aortic aneurism, compressing the right bronchus at its origin, and impinging against the œsophagus and the adjoining large vessels—was, to assume the recumbent posture exclusively, and to live on a very low diet, composed entirely of a little milk and dry toast, three times a day; also, to avoid mental excitement, and every thing else calculated to increase the rapidity of the heart's action. Under this regimen, though he emaciated and became very feeble, in a few weeks the pressure diminished sensibly, and he gradually gathered courage to walk about a little. Some of his medical friends, supposing the symptoms might be caused by rheumatism or neuralgia, blisters were applied repeatedly over the point of pressure, and morphine was given, from time to time, to alleviate the disagreeable sensations. From both of these measures he received a great deal of relief, and particularly while under the

influence of a blister, he always felt better. He slowly, but not regularly, improved in health, and gradually grew so much better that he would lose sight of the pressure for a few days—then for a longer period—then for a month, and at last would only feel it after considerable exercise, or after a *catarrh* of some *duration.* This increase of symptoms did not accompany every attack of pharyngitis and bronchial irritation, but was manifestly connected with them every now and then. During all this period, whatever might be the degree of swelling of the inflamed glands, he always felt better, or well, after a profound night's sleep. His general health and strength, as well as the diseased sensations, were all very much benefitted by a temporary sojourn in a cooler climate. It is now over two years since the attack first commenced, and he is in the possession of a very good degree of health, but still occasionally feels the pressure of his old enemy, and always located immediately below and behind the right sterno-clavicular joint. It should be mentioned, as an item in the history of this case, and probably an element in the diagnosis, that once, in the progress of his case, he was attacked with a sharp rheumatism of the cellular substance, and ligaments about the right internal maleolus, and that while laboring under this, he felt clearer of disagreeable sensations in his chest than he had done for months.

REMARKS.—After this case had been under my observation for two or three months, finding that the aneurismal symptoms made no progress, I came to the conclusion that the disease was localized inflammation and enlargement of the bronchial glands. Professional opinions were divided between aneurism of the aorta, emphysema of the right superior lobe and enlargement of the bronchial glands. The diagnosis manifestly was confined to these three.

In considering the disease with reference to aneurism, after the time above mentioned, an adverse conclusion was arrived at mainly on the following grounds:

1st. That no local dulness had made its appearance. On the contrary, a remarkably clear resonance was elicited on percussing the upper part of the chest.

2d. The complete intermission that frequently occurred in the symptoms and the apparent return to health at these times. Although there is no doubt that, in many organic diseases strange remissions and intermissions are noticed in the symptoms, and

sometimes in aneurism of the aorta, no indications at all of the disease are observed until the fatal hemorrhage; yet, it is highly probable that when dyspnœa, dysphagia, and other evidences of pressure are produced by an aneurism, they never come and go, with the frequency and completeness met with in this case.

3d. Its manifest connection in repeated instances with catarrhal inflammation of the large bronchial tubes, while it would, perhaps, be a difficult task to point out a part or organ of the human body that might not fall under the dominion of catarrh; it may safely be asserted that aneurismal dilatation of the aorta is as little liable to its influences as any portion of the organism, diseased or normal.

Emphysema of the upper lobe of the lung was discountenanced, by the absence of that persistent dyspnœa and dilatation of the chest, which are necessary features of that disease. Although the chest was clear on percussion, instead of there being an elevation, there was a depression of the right subclavicular region. The dyspnœa of emphysema is a continuous inflation and turgidity of the thorax without evidence of any particular local pressure. This individual could inspire and expire with perfect ease.

Having thus dismissed aneurism and emphysema, we arrive at the diagnosis of enlargement of the bronchial glands.

As time wore on, this opinion became strengthened, and after a year or two had elapsed, amounted almost to a certainty.

On the other hand, allowing the disease to be recurrent inflammation and tumefaction of a bunch of the bronchial glands immediately about the bifurcation of the trachea and the right bronchus, the symptoms tallied very well with this supposition. Its connection with catarrh was in union with the glandular nature of the affection, while the existence of pressure, without any dulness on percussion, also agreed with this idea; the bronchial glands being much more deeply seated than the aorta, would admit of a great increase in size without producing an alteration in the natural resonance of the chest. A very notable relation between catarrh and tumefaction of these glands is probably an unusual feature of this rare disease. If we admit that this diseased relationship was once established between them and the mucous membrane of the right bronchial tubes, it would always be likely to occur whenever the patient contracted catarrh. In this person, the bronchitis always occurred on the right side, and was confined to the larger tubes. It is highly probable that, in this case, the enlargement was

not of a tuberculous character, from its progress differing so remarkably from the same disease in children.

Rheumatism, which comes in as a disturbing element in the diagnosis and treatment of almost every chronic disease, played its *role* here also. The remarkable relief experienced simultaneously with the appearance of rheumatism near one of the ankle joints, showed, in my opinion, not that the disease was solely a rheumatic affection, but that the rheumatism, which, perhaps, is always determined *to* or *near* a part, by the presence of a chronic disorder, was removed for the moment to another locality. I have observed that chronic disorder of the heart almost always *determines* rheumatism to that organ, and to the intercostal muscles, and ribs in front of it; and it is extremely probable that the tenderness and pain accompanying tuberculous disease of the apex of the lung is of the same character. The same may no doubt be said of much of the pleuritic adhesion seen in tuberculous disease, i. e., that it is the result of rheumatic inflammation.

In addition to the remedial agents previously mentioned, much benefit was received from the free use of Scotch ale and cod liver oil.

4. *Case of Wound of the Aorta.*—I——d, a consumptive, in a drunken rencontre, was stabbed by his opponent in the supra sternal fossa, with a long narrow bladed knife. The external wound was small, accompanied by no hemorrhage and soon healed up. I——d, died in something over a month afterwards, of his internal disease and of the irritation of several other cuts received in different parts of his body, and a post-mortem was made by Dr. J. B. Wiley, in presence of Drs. Baber, McGoldrick and Guyton. On elevating the sternum, attention was drawn to a hard round ball attached to the aorta, in front, at the beginning of the arch. Upon making a careful examination of this ball, it was found to be a spherical indurated coagulum, covering a wound in the aorta itself. The ball was indurated to such a degree as to resist with success all the pressure that could be made between the thumb and fingers of several of the party present, who tried to crush it. But the most surprising feature in the whole case, is the fact, that the wound, which was about one third of an inch in length and in the longitudinal direction of the vessel, was, that no attempt had been made to unite it. The edges were perfectly smooth and sharp. The contour of the vessel at this point was

indented, forced inwards by the coagulum, and this may be an important element in understanding this extraordinary case. No mistake could have been made in reference to the patulousness of the slit in the aorta, as its singularity immediately attracted the attention of all present, and it was repeatedly examined.

These particulars were received from Dr. J. B. Wiley, a very competent and reliable observer, and quite familiar with necroscopical examinations.

The following is a conjectural modus operandi of this case: The wound was probably inflicted while I——'s head was thrown back and drawn to one side, and the aorta withdrawn from its proximity to the sternum; the effusion of blood took place at this moment, and the head was then immediately thrown forwards, thus being converted into a valvular one. The small quantity of blood that rushed into the cellular meshes of the anterior mediastrinum, was confined there, forcing the edges of the wound in the aorta back, and keeping them in a perfect state of apposition and preventing any farther hemorrhage. The blood coagulated and eventually assumed the dry, indurated form, in which it was discovered at the post-mortem. The reason of there being no evidence of an attempt at union, probably, was, that any effusion of coagulable lymph to effect this purpose, was immediately washed off by the mighty torrent of arterial blood that swept through the vessel.

ARTICLE XIV.

LETTERS FROM SAML. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY. LETTER NO. 1.

MONTGOMERY, ALA., April 30th, 1855.

Messrs. Editors: Having promised to furnish you with my views upon certain medical subjects in the form of "familiar letters," it is proper to say that I have no motive beyond a desire to add my testimony to the truth or falsity of the principles and practice of medicine in the present day; and whether the opinions which I entertain, theoretical or practical, are the result of my own observation, or have been derived from the observation and experience of others, makes little difference, as I lay no claim to originality of invention or discovery; and holding that the written opinions of men are common property, which may be adopted or rejected, as they may appear to be sustained by truth and reason, or otherwise, no exceptions can be taken if "I claim a charter

wide as the winds, to blow on whom I please." It is proper, also, to say that my subjects will necessarily be desultory; but I will endeavor to preserve as much connection between them, and make as few digressions as possible. Having said so much by way of preface, I will call your attention first, to the consideration of "Congestion." This term, (and its correlatives) which has become with the medical profession a *house-hold word*, has been defined by Dr. Wood, (who may now justly be regarded as standard authority in this country) to be "an unhealthy accumulation of blood in *any* of the bloodvessels of the body." Now, this definition is perfectly correct and unobjectionable, so far as the term is used strictly according to its *literal* signification, in which sense it matters little in what vessels the accumulation takes place, or what the condition which produces it. But we, of the South, are in the habit of regarding what Dr. Wood describes as "active" congestion, (in which the blood accumulates in the arteries and their capillaries,) as one of the phenomena of inflammation,—the natural product of *excitement*, to which condition the idea of congestion never attaches, and to which the term is never applied. On the contrary, his "passive" congestion furnishes a true and graphic description of the opposite condition of *depression*, and consequent "unhealthy accumulation of blood in the venous cavities," a condition so often met with in connection with the diseases of the South, as to have *justified* a *prefix* of the correlative term "*congestive*," which, if objected to on the ground of its not being expressive of the true pathological condition of *depression*, it is not less objectionable, with respect to that of *excitement*. It must be remembered that the term *congestion*, and its correlative, *congestive*, are never used in the same sense; one is used to express the condition of a particular organ; the other, the condition of the whole system: thus, when we speak of congestion of the liver or lungs, we mean that there is an "unhealthy accumulation" of blood in the *vena-portarum* or pulmonary artery, without reference to the condition of the general system, which may be in a state of exaltation or excitement, or in a state of depression. But when we speak of inflammation of the liver or lungs, we mean that there is an *unhealthy accumulation* of blood in the trunk, branches, or capillaries of the hepatic or bronchial arteries; and so of any other organs, for which condition, a more expressive term may be found in that of *engorgement*, and thus obviate the clashing and confusion of terms. When the term congestive is

used, it does not convey the idea of congestion in any *particular* organ, or set of organs, but it conveys the idea of congestion, in *any* and all the organs which are liable to congestion, coupled with a condition of general *debility* and *prostration* or *depression*, and gives an *appellative* character to all diseases upon which it is attendant,—hence, we speak of *congestive fever*, *congestive pneumonia*, *congestive dysentery*, &c.

The corollary from what has been said, is, that the *definition* given by Dr. Wood to congestion, is, in itself, objectionable, in as much as it confounds under one term, two diametrically opposite pathological conditions, one having the characteristic phenomena of excitement and irritation or inflammation, with arterial and capillary "*engorgement*;" the other, having the *equally* characteristic phenomena of *debility* and depression, with *venous congestion*. The latter condition, which, I believe, has been considered by systematic writers in a secondary point of view, and treated of by them, as a temporary and fugitive condition, I now propose to consider in the light of a primary and essential pathological condition. Before I do so, however, it will be proper for me to give some reasons explanatory of my motives for so *considering* it. In the first place, the doctrine of an *exalted nervous excitement* and a corresponding *vascular action*, has been almost universally received as constituting the essential type and characteristic of all febrile affections, idiopathic or symptomatic, with the exception, perhaps, of hectic and typhus; and the word *fever* conveys almost as universal an idea of that condition, as the word *fire* does that of heat. I do not pretend to say that *fevers* have not an essential typical character; on the contrary, I maintain that they have, and in that character they are universal and unchangeable; hence my belief, that there never has been, "*per se*," such a thing as congestive or pernicious fever, and that these, and other forms and varieties which have been described, are but modifications of the *one* essential type. In yielding this point, I by no means acquiese in the idea, that exalted nervous excitement, and increased vascular action, constitutes the essential character of *fevers;* for an intermittent or remittent fever, requiring, from its character, the prefix, "congestive," in which there is neither, is just as much an intermittent or a remittent fever, in its essential type, as if there was ever so much excitement and vascular action. Now, the true essential type of *fever* belongs to its pathognomonic signs, which are manifested in its *periodic* exacerbations and remissions, or the

regular *rise* and *fall* in *nervous excitement*, and a corresponding increased or diminished *vascular action*, as the pathological condition of the system favors *excitement*, or *depression*.

In the second place, the doctrine of exalted excitement and increased vascular action, has invariably pointed to that condition as the chief source of danger in febrile affections, and has as invariably suggested a resort to the remedies known as antiphlogistic, and sedative, which reduce excitement and subdue action for their cure. But what appears strange to my mind, is, that while Southern physicians have been forced (as it were) to discard or abandon, one by one, the remedies of that class, as unsuited and even hurtful in the treatment of febrile affections generally, they should have adhered to the doctrine which sad experience must have taught them, leads often to disappointment and disaster. This *inverse* proof, alone, ought to be sufficient to establish the fact, that the *essential pathological condition* in the febrile affections of the South generally consists in *nervous debility* and *depression*, and consequent diminished vascular action and "congestion," and points directly to the source of danger, and the means of cure, to be found in that class of remedies known as stimulants and tonics. Nearly thirty years of constant observation has served to convince me that such is the character of our febrile diseases, and acting upon this belief, truth and candour prompts me to declare that I have seldom been at a loss as to the course necessary to be pursued, or the selection of proper remedial agents to suit the varied forms and modifications which they assume.

Such being the general character of those affections in Southern latitudes, it becomes a matter of much interest to enquire into the nature of the causes, and the manner in which they operate to produce it, which will in due time claim our attention; but, first, let us look at the condition itself, and see in what it really consists. I have said, or intended to say, that the condition is *not determined* by the *local* affection, whether of excitement or depression, nor by the proximate or exciting cause, but by the remote and predisposing causes; and when the general system is brought under the influence of those local causes, the phenomena of excitement, or depression, will be manifested, as one or the other of these conditions may prevail. A perfect model of these two conditions, with all their characteristic phenomena, is found in a simple intermittent, which I will present, as the most familiar illustration of my views of the subject.

Suppose, then, that some cause has operated to throw some organ, as the liver, stomach, &c., into a condition or state of temporary debility or depression—the brain, taking cognizance of the condition, will rally the vital forces to the assistance of the suffering organ, where an accumulation of the vital power, or excitement, takes place, at the expense of a proportional loss to all the other organs. The *remote* and *general capillaries* sharing in the general loss of nervous power, allows the blood to pass freely through them, into the venous radicles—thence, into the large *venous cavities;* and while this process is going on in the remote, arterial capillaries, the muscles of respiration participating in the loss, respiration becomes impeded, the lungs expand imperfectly, and the flow of blood is retarded, through the pulmonary capillaries, thus giving rise to an unhealthy accumulation of blood upon the *right* side of the heart, constituting the *congestion* or cold stage, with all the phenomena consequent upon such a condition of things. The "congestive," or cold stage, having been fully established, the hot stage, or stage of excitement and reaction, may be supposed to take place in the following manner:—The accumulation of *vital power* in the laboring organ being, now, no longer necessary for its support, over and above its due and accustomed supply, is again distributed to the organs whence it was taken. Among the first to share in the distribution, and to feel and manifest the influence of its return, are the organs of respiration, which, regaining their accustomed power of action, the chest and air-cells become more expanded, allowing of a free transmission of blood through the pulmonary capillaries, and as the function of respiration is increased, the blood moves forward through the *congested* vessels; the heart, being excited to increased action by a supply of fresh arterial blood, sends it forward to the remote arterial capillaries, which, having regained their lost tone, now oppose resistance to the hitherto too free transmission of blood through them, and the blood continuing to flow more rapidly and freely through the pulmonary, than through the remote capillary extremity of the circulation, necessarily accumulates upon the *left* side of the heart, giving rise to *arterial plethora,* and constituting the hot stage, or stage of excitement and reaction, with all the phenomena consequent upon the condition.

Such, I think, may be regarded as the process which occurs in every shade and degree of general depression and congestion, from the slightest chill, to the most perfect collapse, on one hand,

and from the slightest excitement, to the most violent reaction, on the other. It is not important, in this connection, to attempt to trace out, and explain, all the phenomena which characterize and distinguish these opposite conditions, as the feeble pulse, the cold skin, the palid countenance, slow breathing, &c., on one hand, and the hot skin, the flushed countenance, the hurried respiration, and the full, strong pulse, (to say nothing of the signs of local disorder,) on the other. These phenomena, in their full force and character, stand so wide apart, that there is neither doubt nor difficulty in determining the true pathological condition from which they spring, or in applying the proper correctives, one being recognized as *inflammation*, the legitimate offspring of excitement and *vigour;* the other, as *congestion*, the offspring of depression and *debility.* But there is an *intermediate* condition, having no separate or independent pathology, which seems to play a part between the two pathological conditions of excitement and depression, manifesting sometimes, the phenomena of one and sometimes of the other, and not unfrequently, indeed I might say very often of both; this condition appears to be the product of *excitement and debility*, as inflammation is the product of *excitement* and *vigour*, to which it appears to be the stepping-stone, and to which it is so nearly allied in its general aspects as to have led to an incalculable amount of abuse, and ultimately to the rejection of the remedies most appropriate for the reduction of inflammation, namely, the lancet, emetics, cathartics, diaphoretics, sedatives, &c. This intermediate condition, which is known as "Irritation," occupies all the ground between excitement and inflammation on one side, and depression and congestion on the other, and as the excitement rises *above* "the line of healthy action" up to the point of inflammation, I would distinguish it as *irritant;* and as it descends below that line towards congestion, I would distinguish it as *congesto-irritant.* (Now if these terms are objected to on the score that they are arbitrary, I am certain that they are not more so than others, which have found currency, and which are less expressive of the true pathology of the diseases which fall under the condition which I am attempting to describe, such as "adynamic," "malignant," "pernicious," &c., terms expressive rather of danger than of their pathology, with perhaps, the exception of the first, which conveys the same idea of debility and depression, but not necessarily of congestion.)

Another distinction which may be advantageously employed

to express another modification of the two conditions from which it is derived, namely, "*congesto-inflammatory*," in which the system is pretty well balanced between excitement and depression; that is to say, where there is an amount of *vigour* present, just sufficient to keep the excitement up to, or a few degrees above the line of healthy action, but which under the influence of some sudden, depressing cause, as a copious bleeding, excessive purging, &c., would run rapidly into a state of permanent depression and congestion.

It is no difficult matter to draw the line of demarcation between the extremes of these conditions, but it is otherwise with respect to the subdivisions, and I will hazard the assertion that, he who is able to do so in practice, will receive as the meed of his judgment, a full measure of success.

It is my design to endeavor to point out as clearly as possible the signs by which these conditions are distinguished, which may be better done in connection with some particular forms of disease, and which I will defer to some subsequent communication. My next letter will be devoted mainly to a consideration of the *causes*, and the manner in which they operate, to produce these opposite pathological conditions and their modification.

Hoping that you may have patience to follow me through this intricate, but important, subject.

I subscribe myself, your friend, &c.

SAML. D. HOLT.

ARTICLE XV.

Action of Sulphate of Quinine on the Uterus. By JNO. STAINBACK WILSON, M. D., of Lawrenceville, Georgia, (formerly of Airmount, Alabama.)

Having seen several cases in my practice, in which I had reason to believe that the quinine acted *directly* on the uterus, increasing the lochial and menstrual discharges, I desire to call the attention of the profession to this interesting feature, for the purpose of eliciting further investigation. It will, doubtless, be readily admitted that quinine may act as an emenagogue, in anemic conditions, by virtue of its tonic and invigorating properties, and by equalizing the circulation, removing thus those local congestions,

which, by depriving the uterus of its quota of blood, interfere with the proper performance of the menstrual function. But, in addition to this mode of action, I am induced, from observation, to entertain the idea that the article which engages our attention, has a more direct, immediate and specific effect on the uterus; or at any rate that its action on this organ is so prompt in some cases, as to forbid the hypothesis that the result is due to its tonic properties. As before intimated, I have been led to this opinion by observing the effect of quinine in several cases of puerperal disease, pneumonia, intermittent fever, &c., where this remedy appeared to act decidedly on the uterus when given to fulfil other indications. One of the most striking of these I will report, and others might be adduced, but the details cannot now be recollected and recorded with a sufficient degree of accuracy to bring the same conviction to the mind of the reader that the actual facts observed did to my own.

CASE. Mrs. ——, pregnant with her second child; has had occasional attacks of chill and fever; general health in the intervals pretty good, as the paroxyms were never allowed to continue any length of time. On 11th September last, she was delivered. About two weeks after this time, the lochia having almost disappeared, the intermittent returned. She took three five-grain doses of quinine, which prevented the recurrence of the paroxysm, and *in a few hours after taking the medicine, the lochia became profuse and of a sanguineous appearance.* About a week after this last attack, she had another, when the same remedy was used with a like result. Three months or more after her confinement, and after every vestige of the lochia had, of course, disappeared, she again took the quinine for the "chills," and the consequence was, a uterine discharge of a menstrual character. Now, it may be said, that this was a return of the catamenia only; for it is well known that some women menstruate during lactation. But this objection may be answered, by saying that this was not her habit; that her child was young, and by the fact that there has been nothing like menstruation from that time to the present month (April), unless a *very slight* "show" in February was an effort of that kind.

REMARK.—The above case may not be considered conclusive, by many, still I think it is sufficiently interesting to merit attention and to invite investigation; for if the sulphate of quinine, in

addition to its potent general tonic properties, exerts an influence over the uterine functions, either by equalizing the circulation, or by a more direct and specific mode of action, it is certainly a most valuable remedy in anemia, chlorosis, amenorrhœa, dysmenorrhœa, and other grave and complicated affections to which the female system is subject, on account of the sympathic relations of that wonderful element of its constitution, the uterus, that mysterious organ of which it has been truly said, "*Propter solum, est mulier, id quod est.*"

ARTICLE XVI.

Statistics of Mortality in Augusta, Georgia, during the years 1853–'54. Arranged by H. ROSSIGNOL, M. D.

The following Tables are *reliable* as regards numbers and sexes; but the books of the City Sexton, from which the tables are made, are not very correct as relates to *ages* and the immediate causes of death:

TABLE No. 1.

Census of Augusta, taken by order of the City Council, October, 1852.

WHITES.		WHITES.		FREE NEGROES.	SLAVES.		TOTAL.	GRAND TOTAL.
Males.	Females.	Males between 6 and 16.	Females between 6 and 15.		Males.	Females.		
2779	2477	770	766	243	2330	2388	11,753	
Transient or temporary residents—whites, . . .							400	
Free negroes and slaves, not returned, ...							400	
Business and suburb population, ...							1,519	14,072

The above is the last census taken, since which the population is supposed to have increased several thousand.

TABLE No. 2.

Deaths in each year—Still-born included.

YEAR.	WHITES.	BLACKS.	TOTAL.
1853.	195	144	339
1854.	354	147	501

TABLE No. 3.

Deaths in each month—Still-born included.

YEAR.	MONTHS.	WHITES.	BLACKS.	M. TOTAL.	A. TOTAL.
1853.	January,	15	7	22	
	February,	17	13	30	
	March,	5	12	17	
	April,	12	10	22	
	May,	26	10	36	
	June,	13	9	22	
	July,	22	18	40	
	August,	15	15	30	
	September,	18	21	39	
	October,	25	15	40	
	November,	14	4	18	
	December,	13	10	23	339
1854.	January,	18	5	23	
	February,	13	4	17	
	March,	14	8	22	
	April,	25	12	37	
	May,	23	13	36	
	June,	21	17	38	
	July,	40	15	55	
	August,	21	10	31	
	September,	62	15	77	
	October,	76	18	94	
	November,	22	17	39	
	December,	19	13	32	501

TABLE No. 4.

Ages of those who died in 1853 *and* 1854.

WHITES.	Still-born.	Under 5 years.	From 5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Age unknown.	TOTAL.
1853.	10	82	11	12	19	19	14	12	6	8	1	1	195
1854.	15	102	10	26	62	68	30	23	14	1	3	2	354
	25	184	21	38	81	87	44	35	20	9	4	3	594
BLACKS.													
1853.	10	58	11	6	13	10	9	7	7	6	7		144
1854.	5	54	6	11	13	13	9	6	14	6	9	1	147
	15	112	17	17	26	23	18	13	21	12	16	1	291

TABLE No. 5.

Causes of Death, as recorded by the City Sexton.

	WHITES.		BLACKS.	
	1853.	1854.	1853.	1854.
Casualties,	8	7	4	2
Mortification,	3			
Old Age,	5	3	6	9
Diarrhœa,	10	13	1	2
Dysentery,	10	6	7	3
Inflammation of Bowels,	9	20	5	12
Cholera Infantum,	14	7	19	1
Constipation of Bowels,		1		
Pneumonia,	6	17	23	10
Bronchitis	1			1
Consumption,	12	15	4	9
Congestion of Lungs,	5		1	
Inflammation of Lungs,		1		
Disease of Lungs,	1	1		
Scarlet Fever,	10	4	3	1
Typhoid Fever,	14	15	4	4
Congestive Fever,	7			
Bilious Fever,		10		
Yellow Fever,		103		14
Congestive Chills,		4		
Peritonitis and Child-bed,	5	8	2	
Delirium Tremens,	3	2		
Rheumatism,		4	1	2
Neuralgia,		1		
Paralysis,		3	3	2
Congestion of Brain,	2	9	1	1
Apoplexy,	2	5		7
Dropsy of Brain,	1			1
Inflammation of Brain,	2	2	2	
Suicide,	2			
Murdered,		2		
Affections of Liver,	3	3		
Disease of Heart,	5	2	3	1
Dropsy of Heart,		1		
Dropsy,	6	6	9	9
Still-born,	11	15	11	5
Asthma,	1	4	1	1
Spasms and Convulsions,	16	27	13	18
Erysipelas,	3	4		1
Measles,	2		3	
Cancer,	2		2	
Epilepsy,	1			
Tetanus,	1	1		1
Gangrene,	1			
Thrush,	1	1		

Causes of Death, as recorded by the City Sexton—continued.

	Whites.		Blacks.	
	1853.	1854.	1853.	1854.
Worms,	1		2	2
Cramp Colic,	1	1	1	
Croup,	1	2		
Affection of Spine,		1		1
Catarrh,		1		2
Small-pox,		1		
Debility,		2	4	3
Tympanites,		1		
Pertussis,		7	1	12
Marasmus,		1		
Gravel,		1		
Jaundice,		1		1
Abortion,		1		
Uterine Hemorrhage,		1		
Inflammation of Bladder,		1		
Quinsy,		1		
Putrid Sore Throat,		1		1
Dyspepsia,			1	
Hives,			1	
Scrofula,			1	
Tumor of Abdomen,			1	
Hemorrhage of Lungs,				1
Carbuncle,				1
Intermittent Fever,				2
Hemorrhage of Bowels,				1
Diseases unknown,	7	13	2	3
Diseases stated,	188	341	142	144
Whole number of Deaths,	195	354	144	147

TABLE No. 6.

Relative proportion of the Sexes of those who died.

In	1853, died,	(whites)	Males,	114	Females,	81
"	1854, "	"	"	204	"	150
In	1853, died,	(blacks)	Males,	59	Females,	85
"	1854, "	"	"	87	"	60

On Keloides. Read before the Boston Society for Medical Observation, March, 1855. By DANIEL D. SLADE, M. D.

The term keloid, or keloides, is applied to a singular affection of the skin, extremely rare, and not even described by many writers on cutaneous diseases. The origin of the word is involved in doubt; some deriving it from *chele*, a crab's claw—while others,

with more propriety, suppose that it was derived from *kelis*, a burn, owing to the resemblance of the affection to the cicatrix left by such an injury. This disease was first described by Alibert, and by him termed cancroïde, like cancer. Since this writer, we find observations upon the same affection in the works of Biett, Velpeau, Cazenave, Warren and others.

Dr. Addison, who has recently published an excellent paper upon keloides, in the Transactions of the London Medico-Chirurgical Society, speaks of two forms of this disease under the names of "keloid of Alibert," and "true keloid." The former is the subject of the present paper. True keloid, he describes as a disease which has escaped the observation of other writers, and one which leads to much more serious consequences than the common form. It occupies the same tissues "and is first indicated by a white patch or opacity of the integument, of a roundish or oval shape, varying in size, and very slightly or not at all elevated above the surrounding skin," at commencement not attended by any pain or inconvenience, although a more or less vivid zone or redness surrounding the whole patch sufficiently attests the vascular activity going on in the parts beneath. As the disease proceeds, certain changes take place in the affected parts. Itching, pains, tightness, or constriction, are felt at the seat of the disease, accompanied by "a certain amount of subcutaneous hardness and rigidity extending beyond the site of the original superficial patch, although as yet without any necessary change in the appearance of the superincumbent skin. This hardness and rigidity can be distinctly felt, and, especially when situated on the extremities, may sometimes be traced along the course of the neighboring tendons or fasciæ, or stretching like a cord along the limb, so as to bend or shorten it, and even interfere with the natural movements." As the disease advances, the skin, which may have presented only a slightly drawn or puckered look, now shrinks or shrivels, undergoing a decided change of color, becoming reddish, pinkish or yellowish. The cutis manifests a tendency to superficial ulceration or excoriation; or when not excoriated, is occasionally surmounted by obscure tubercular or nodular elevations, the whole appearance closely resembling the remains of a very extensive and imperfectly cicatrized burn. The elevated, claw-like processes extending into the neighboring tissues may also often be seen, bearing a very exact resemblance to those which characterize the keloid of Alibert.

Dr. Addison does not enter into any speculation regarding the origin and nature of this form of disease. He merely states that this morbid process is allied to inflammation, probably of a strumous character. Neither does he dwell upon the treatment, excepting to remark that with the exception of iodine, none of the many remedies tried, seemed to make the slighest impression upon the progress of the disease.

I am inclined to suppose, on reading Dr. A's description, that

this form of keloides is more properly that form of *cancer*, which has its seat in the same tissue, the derma, and which has a tendency to increase rapidly, constricting and rendering the skin very tense, the parts becoming hide-bound. Velpeau calls this form cancer *rayonné*, and at his clinique I remember that he mentioned a case where the skin became so constricted over the chest by the progress of the disease, as actually to stifle the patient. He never advises extirpation in this form of cancer.

Warren, in his work on tumors, makes three varieties of this disease. 1. A white permanent elevation of the skin. 2. The spider-like pimple of the face. 3. The keloid of Alibert. To the latter form I wish to call your attention more particularly.

This affection, although rare, has characteristics so well marked that it would be difficult to confound it with any other disease, especially when it has attained any considerable growth. It first appears as a small pimple or tubercle, round or oval in shape, hard, shining, and generally of a reddish tinge, although the color may vary, as we shall presently see. Its growth is slow, and it may attain the size of an inch to two inches in length, half an inch in breadth, and an elevation above the surrounding skin of from several lines to one-fourth of an inch. To the touch it is hard, elastic, and would convey the idea of a cartilaginous body set in the skin. I can compare this peculiar feeling, particularly when the tumor is small, to nothing better than the induration which so well marks the true or Hunterian chancre, especially when this latter is seated upon some homogeneous tissue which can be easily compressed, as upon the prepuce.

In the majority of cases we find only one of these tumors, but occasionally several. Biett mentions the case of a young woman who had eight of them upon the sides of the neck and chest. Cazenave speaks of having seen more than twenty upon the chest and arms of a young female. M. Lebert saw, in the wards of Velpeau, a case where the whole pectoral region of one side was covered with these tumors, many of which were sufficiently large to have reddened and eroded the surface of the skin at their borders. They may be together in the same neighborhood, or occupy parts remote from each other. Their place of election would appear to be upon the chest near the sternum, between or upon the mammæ, or upon the arms. They may, however, occupy any portion of the surface of the body. Observation would seem to show that females are more prone to the disease than males. These tumors are generally attended with a pricking or burning sensation, more severe at certain times than at others. Sometimes it becomes almost insupportable, particularly in females—while in other cases, it gives rise to no inconvenience. As these tumors vary in shape, being sometimes oval, and sometimes elongated, with a convex or flattened surface, so does their color vary, from a blanched appearance to a light rose, or, as is most common, to a deep red, presenting exactly the tint of a cicatrix from a burn. Cazenave says their

color undergoes changes, according to the temperature, and in females, at the menstrual period. Their growth, as we have seen, is gradual and slow, and seems to be effected by the gradual encroachment of the claw-like processes from the sides of the tumor upon the surrounding skin, producing a puckered appearance of the tissues.

Keloides are developed in the derma, or more particularly, according to Dr. Addison, in the subcutaneous areolar tissue, between the cutis and adipose membrane. This gentleman attributes the redness and itching attending the growth of these tumors to the presence of a degree of vascular excitement nearly allied to inflammation, and which gives rise to a certain amount of adhesion amongst the meshes of areolar tissue around.

As to the causes of this singular affection, we must confess our almost entire ignorance. Some have attributed it to the influence of the strumous diathesis. That it really depends upon certain constitutional conditions, we have reason to infer from the fact of its almost constant recurrence after extirpation. It would seem that the presence of the cicatrix of a boil, burn or recent wound, sometimes acts as an exciting cause, as we find the affection more frequently developed upon such parts, than upon the sound skin.

In our prognosis we can hardly consider that keloides are a serious or grave disease; and in those cases where it has assumed a malignant form, we may, perhaps, attribute such a result rather to the curative means employed than to the natural progress of the disease. If abandoned to itself, it makes very slow progress, and according to some authorities, occasionally disappears spontaneously, leaving behind merely a white cicatrix. Cazenave says that it very rarely terminates by ulceration.

In regard to treatment, we can say but little. Various internal and external measures have been tried, without satisfactory results. Extirpation and cauterization have been too often followed by a return of the malady. Addison says, that when the disease has been first developed in a cicatrix, the extirpation has proved more successful, than when it has occurred in the sound skin. When extirpation is practised, care should be taken to remove a good portion of the surrounding tissues, in order to be sure of leaving no apparent traces of the disease behind. Moreover, the lips of the wound should be brought well together, and secured by adhesive plaster or collodion, in order that we may obtain union by first intention. It has been observed that the disease has returned in the wounds made by sutures. Warren speaks of a case where the disease not only returned in the cicatrix, but also at each of the points where the needle was passed through, so that instead of one tumor there were seven. Cazenave says that iodide of potassium has been administered with some success in cases where the disease appeared to depend upon a scrofulous diathesis. As we have before remarked, this affection, like cancer, seems to depend upon constitutional causes; therefore it would seem ra-

tional to suppose that the only sure method of combating it, is by general treatment.

The two following cases have come under my own observation:

Case I.—February 7th, 1852. Mrs. P., colored, æt. 45. Reports that about four years ago, being in good health, she first perceived a small, hard, elastic tumor in the skin, just over upper third of sternum. Its growth, which was gradual, was accompanied by stinging, darting pains, almost constant, particularly at night, rendering her very uncomfortable. This tumor was also somewhat painful when squeezed or compressed. Knows no cause for the appearance of this tumor; never received any blow or burn upon these regions. At the expiration of two years, the tumor having attained the size of a large almond, she sought medical aid. Extirpation was advised and performed. The disease, however, returned in a cicatrix; and at the date when I first saw her, two years after the operation, the tumor had attained the same size as before, viz., about half an inch in length by one fourth in breadth, raised several lines above surrounding skin and convex upon the surface; quite painful when compressed. As the patient complained greatly of the annoying, darting and pricking sensations to which this tumor gave rise, I advised its extirpation again. This was done. Care was taken to remove a considerable portion of the surrounding healthy skin, and the wound was brought together by adhesive plaster. Although a portion of the wound healed by first intention, the disease returned in the cicatrix. I lost sight of the patient soon after.

Case II.—February 2, 1855. John F., æt. 25; married. England. Tailor. Of decided lymphatic temperament; light complexion and brownish hair. Reports that, about four years ago, he first perceived a small, hard, oval pimple or tubercle in the skin, just over middle of sternum. This continued to grow very gradually, its growth being accompanied by pricking, darting pains, much more severe when he became heated. About two years after, another similar tumor made its appearance, a little above and to the right of the first one, accompanied with similar sensations. About six months ago, another appeared to the left of the first one. Knows no cause for the appearance of these tumors. General health good.

Now, on examination, I find a tumor situated over centre of sternum, one inch and a quarter in length, half an inch in breadth, and raised half an inch above the surrounding skin; convex on surface. It is of a bright scarlet color, glistening, hard, elastic, regular in shape, with slightly-marked claw-like processes extending into surrounding skin from base of tumor. The skin in immediate neighborhood appears natural. Another tumor of similar character, and of nearly the same size, but not as hard or glistening, and of a blanched appearance, is seen to the right and just above the first described. Here the claw-like processes are very

distinctly seen. Another, the size of a small pea, is to be seen at left of first. Suffers no pain on compression of these tumors.

Patient being derious of having the largest of the tumors removed, the operation was performed. The same care was taken as in the first case to secure an immediate union. The disease has, however, returned in the cicatrix, and I have thought it useless to interfere with the other tumors.

Dr. Shaw made a microscopic examination of the tumor removed; this is his report:—

The tumor, to the unassisted eye, has a fine, fibroid appearance; the fluid expressed from it was clear. The disease was apparently confined to the cutis, and was covered with the epithelial layer. Its minute structure consisted of fine, wavy, straight and curling fibres with a few free, oval, fibro-plastic nuclei, such as are commonly found in these growths. It resembled the structure of the condensed cutis, rather than the coarse fibrous structure of fibrous tumors.

The following cases have been kindly communicated to me by Dr. J. M. Warren. One or two of them I had the opportunity of seeing with him.

Case I.—A lady, 25 years old, of very delicate skin, for many years had a tumor on the back of right fore-arm, which commenced first from a scar caused by a burn. The tumor gradually enlarged to the size of a dollar, was quite elevated above the surrounding skin, of a whitish color, with red streaks through surface of it. It was the seat of severe lancinating pains. It was carefully removed, with the subjacent cellular tissue, and healed slowly, but well. It was not possible to approximate the edges of wound, on account of its size and form. It remained well for some years, when the disease began to re-appear in the scar, and extended, so that at the end of nine or ten years it was nearly of the original size. Last year (1854) I again removed the disease, having first congealed the parts with a mixture of ice and salt. It again healed well. Now the place is occupied by a thin cicatrical tissue, much depressed beneath the level of the surrounding integuments. At one spot, there is a slight thickening and redness, the size of half a pea, and she imagines that after sewing a great deal she has a pain in it.

Case II.—Healthy girl, 19 years old, with two keloidal tumors on sternum between mammary glands. Tumors elevated, reddish, one the size of a ten-cent piece, the other of a pea, and placed about an inch apart. I removed one, and brought the edges together with adhesive plaster after a little dissection underneath the skin to loosen it and allow more easy approximation. Stitches were avoided, for fear of a return of the disease in the places of suture. The disease returned in five or six weeks, notwithstanding all the care taken to secure a good union.

Case III.—Lady, about 40 years old; has had a small keloid tumor on sternum for three years, commencing small and grad-

ually increasing. I advised removal, as it was becoming painful, and the patient was apprehensive of cancer. The disease was removed by a skilful surgeon in a neighboring city, and the wound brought together by stitches. I understand that the tumor has returned at the original seat, and also in all the places of suture.

Case IV.—I removed a tumor of this nature from a girl 17 years old, about a year since. It was situated on the back, over the right scapula, and was caused by a burn. The tumor was elevated above the skin, had the usual lardaceous look, with vessels streaking the surface of it. The dressing was conducted with much care. The desease, however, re-appeared within two months, but of less size, less induration, and free from the darting pains attendant on the former one.

There is a general idea among medical men in regard to these tumors, that they are of a cancerous nature, and that they terminate in cancerous ulceration. The patients are alarmed by the lancinating pain, described as similar to those belonging to a cancerous affection. I have seen many cases besides those above described in the practice of other physicians, both at home and abroad, and thus far have had no reason to believe that there was anything malignant in them; in fact, nearly all the above tumors were examined by experienced microscopists, and the only prominent characters of the texture were found to be fibrous—never cancer cells.—[*Boston Med. and Surg. Jour.*

[Note.—This affection is quite common in this State, among Africans or their immediate descendants, showing itself most generally upon the sternum in the form of one or more transverse bands of elevated and indurated cutaneous tissue. Although frequently of spontaneous origin, it does sometimes show itself at the seat of injuries of the skin more or less serious. We have seen several negroes in whom they resulted from the effects of the lash upon the shoulders and back; in others from burns. It is comparatively rare here in the white race, as we do not remember having seen more than three whites affected with it, whereas we must have seen at least fifty blacks thus affected.

According to our observation it is very generally harmless. We have seen a few cases, however, in which it terminated in suppuration and then had very much the appearance of a schirrous cancer. Yet the general health seemed unimpaired and the suppuration was not attended with loss of substance nor extensive ulceration.

We have usually let them alone; but in two instances in which we practiced extirpation, the disease returned. D.

Involuntary Seminal Discharges. By D. D. Slade.

Since the reading of our paper on Involuntary Seminal Discharges, before the "Boston Society for Medical Observation," and published in the Boston Medical and Surgical Journal, Vol. XLIX, No. 22, farther experience in many cases has entirely confirmed the opinions therein expressed. In addition, we have the satisfaction of knowing that our views upon the subject have been received with marked approbation by many of the profession. In a letter communicated to us soon after the publication of the paper in question, our oldest and most esteemed practitioner says, "Since I had experience enough to form an opinion, I have been satisfied that the alarming statements and consequent anxiety on this subject were groundless. That there are cases which would ordinarily come under this head of a severe character and really injurious, is true, but these are very rare. I could almost count all such cases upon my fingers, after the experience of more than half a century.

In common cases, I say to the patient that matrimony is the remedy. Illicit indulgences are not the same thing. They are usually irregular and often excessive. In quiet, domestic life, *usually*, the indulgences are not more than can be borne, after the early periods."

The importance of this subject, affecting as it does, to a greater or less extent, the happiness and peace of mind of so many young men not only in our cities but also in our country towns, who get erroneous impressions from perusing the publications and advertisements of charlatans so widely circulated, has induced us to ask the favor of a place in your journal for our paper, with some trifling additions made since its first publication.

We may venture to say that there is not a medical practitioner among us who is not sometimes consulted by individuals who suppose themselves to be suffering both mental and bodily derangement from involuntary seminal discharges, occurring more or less frequently. In the great majority of these cases, it is found that these discharges occur during the night, whilst the individual is asleep, and that they are preceded by erections excited during lascivious dreams. Cases of this description are extremely common, and are generally classed by medical practitioners and writers under the term spermatorrhœa. Our object in preparing the present article is to attempt to show that these cases, as they are commonly presented to our notice, do not merit the importance which has been given them, and that they should be considered as entirely separate and distinct from what may be strictly termed spermatorrhœa (although they may sometimes lead to this,) an affection, which, as described by medical authors, we conceive to be extremely rare among us. Sufficient, it is true, has been written upon spermatorrhœa, but the exaggerated descriptions therein given do not answer to the cases of simple involuntary seminal

emissions which are so often presented to the notice of the practitioner here, and which he is called upon to treat.

We fully agree with Robley Dunglison, who has written a most practical and sensible article upon the present subject, in the Cyclopœdia of Practical Medicine, that there can be no greater evil to the economy from a flow of semen accompanied by venereal desire without sexual intercourse, than with it. There can be no doubt that an excessive secretion of semen, in whatever way it may be induced, may have an injurious effect upon the system, but we cannot for a moment believe in the long category of complaints which have been attributed to this as a cause.

Involuntary seminal discharges occurring during sleep in young, robust and continent subjects, constitute a class of cases which are almost daily presented to our notice. It is very rare, in fact, judging from our experience, to meet with a young man of vigorous health who does not experience these emissions more or less frequently, particularly if he be continent. And why, we ask, should this be considered as constituting a morbid condition, or as contrary to the laws of nature?

The secretion of semen, although it is, like other secretions, very much under the control of the nervous system, and therefore increased according as the mind is directed towards objects which awaken sexual feelings, must still in a measure, be constantly going on under all circumstances. Consequently the presence of an undue amount of sperm in the vesiculæ seminales (which are truly reservoirs according to the best authorities of the present day) if not got rid of by sexual intercourse, must produce an excitement in those organs during sleep, which excitement is appreciated by the brain giving rise to voluptuous dreams, during which the seminal discharges take place. Even granting the opinions entertained by many physiologists, that absorption of the semen takes place, and that it is necessary for the regular maintenance of nearly all our functions, yet we may easily suppose that this absorption is not the same under all circumstances, and that the supply may exceed the demand, particularly in the young, robust and continent individual.

We can scarcely, then, consider moderate involuntary seminal discharges, occurring during sleep, accompanied by lascivious dreams and erections, as constituting a morbid condition. In proof of this, we may say, that there are many individuals who have had even frequent seminal emissions for a long period without experiencing the slightest inconvenience from them, and without ever even giving them a passing thought, until their eyes fell upon the advertisement of some empiric who has set forth the horrors and dangers to be expected from a similar condition. But from this moment there is no more rest for these poor beings, who constitute a class, which, with Ricord, we may term "veritable spermatophobist, men who are tormented, hypochondriacal, dejected, and in whom the cauterization of the neck of the bladder does not always succeed in curing the brain."

It may be asked, then, to what extent these seminal discharges may take place without actually producing any morbid effects upon the system. In answer, we must say, that this depends upon circumstances, upon the peculiar temperament of the individual, upon his diathesis, &c. In the healthy and continent subject, we again remark that they exert a beneficial effect upon the economy, by freeing it from a source of excitement, and that unless they occur more than once in a night and oftener than once or twice a week, they can scarcely be said to constitute a pathological condition. We have seen patients who have actually thrived and grown stout and hearty, in whom these discharges occurred almost every night.

What the pathological condition of the vesiculæ seminales and of the ejaculatory ducts may be in this class of cases, we have comparatively few means of judging. When a patient dies, in whom these discharges have taken place, the attention at the autopsy is drawn to some other more serious affection, which has been the cause of death, so that the examination of the spermatic organs is almost always neglected. Even in the severest forms of spermatorrhœa, few observations have been made upon the condition of these organs after death, owing chiefly to the amount of care and patience necessary, and to the mutilation requisite to arrive at a proper inspection of the parts, which we cannot well make upon a subject in private practice; and such cases rarely die in hospitals. Where examinations have been made, however, more or less sub-acute inflammation has been discovered in the membranous and prostatic portions of the urethra, and in the ejaculatory ducts—the result, generally speaking, of lesions produced by excessive venery, or masturbation. This is what we might expect.

Involuntary seminal emissions may and do occur in the robust and continent, without any decided cause beyond what we have stated, viz: a certain plethora of the seminal vesicles; but in the majority of cases, upon inquiry we *do* find that their too frequent occurrence is attributable to masturbation, to excessive sexual indulgence, or to effects produced by gonorrhœa—and occasionally to strictures of the urethra. We are inclined to doubt the efficacy of certain other causes which have been supposed to be productive of these discharges, such as the metastasis of old cutaneous eruptions, hemorrhoids, ascarides, horse-exercise, and the use of certain medicaments, unless there is also present a certain amount of morbid irritability in the urethra.

The general effects ascribed to even moderate involuntary emissions are various, and greatly exaggerated, nay even fabulous. There is scarce a function in the body which has not been described as becoming perverted by this cause. However it may be, we must confess that there seems to be a certain relation between these discharges and the mental powers, for we find that patients who experience them are generally more or less misanthropic, hypo-

chondriacal, agitated, and unable to apply themselves to any fixed pursuit. We know that this cannot be the effect of a moderate loss of the seminal fluid, however much it may be the result of *excessive* losses, and therefore are we not to look for the cause elsewhere; in the perusal of certain books, reputed to be medical—the reading of the advertisements of the charlatan, which disgrace so many of our daily newspapers—and in the fondness for conversation upon such topics, always existing in youth? Experience shows us this; we never find that one of these patients comes to us, who, upon inquiry, does not confess that he has read more or less upon the subject of seminal emissions. In the majority of these cases relieve the imagination, and the cure is more than half effected.

In our treatment of simple involuntary discharges, such as we have described, we must act upon the *morale* of the patient, assuring him that the fears of future impotency and insanity which have held possession of his brain are without foundation—that what he has read upon the subject is but the artifice of the quack. To quiet the fears of the "spermatophobist" is to be our first endeavor. Advise him to read no more upon the subject of his fancied complaint, to abandon all vicious habits and erotic ideas as far as possible, and to employ his mind in some engaging pursuit. Above all, assure him that these discharges do not constitute a "drain upon the system," but rather depend upon an excess of sperm, and that if they do occur occasionally they do no serious harm.

Cold bathing, particularly local, in those cases *where a plethoric condition is not manifest;* regular exercise in the open air; attention to diet, and regularity of the bowels; in most cases avoidance of stimulants generally, particularly in the evening, care to empty the bladder before going to bed; avoidance of late suppers; sleeping upon a matrass, with as little clothing as possible to be comfortable; rising at the moment of waking in the morning (for the emissions occur in almost every case at that time); such constitute the most important means by which we are to aid the patient in arresting the too frequent occurrence of these discharges.

With regard to the efficacy of certain drugs in these cases, we must confess that we put little faith in their virtues. There are cases where tonics, ferruginous preparations, &c. are no doubt valuable; but we think that sedatives are more generally useful. Benefit has been derived from Lupuline administered either alone or in combination with ergot, either in pill or powder, at the dose of from gr. iv. to vj., two or three times per diem. We have given a scruple of Lupuline in powder on going to bed with excellent results. It should be continued for two or three weeks. We have also derived advantage from ext. hyoscyami.

We are inclined to think that some simple medicine should be given in all cases, even where the discharges occur very rarely. The "spermatophobist" must and will have something for his

supposed troubles, and if you gratify his whims, it serves to occupy his attention, he feels that he is working out his cure, and that you take an interest in his particular case. Any more active treatment than what we have mentioned is rarely necessary in the class of cases to which we are alluding. Possibly a slight cauterization might be sometimes admissible, or the simple passage of a bougie two or three times a week for the purpose of overcoming any irritability of the urethra. Of course, if stricture should be the cause of the emissions, it should be overcome.

As to the mechanical contrivances which have lately been brought before the public for the cure of seminal emissions, we must say, after considerable experience, that they have failed to answer the purpose intended. They cause too much irritation in the parts and in many cases doubtless augment the evil.

If our patient contemplate entering upon married life, we should certainly encourage it, and moreover at as early a period as possible.

Such we consider to be the value and importance of a class of cases as they are presented to the notice of our practitioners; cases which, we repeat, in no wise, answer to the description of spermatorrhœa, as given by medical writers, and with which they should not be classed.

We do not deny but that true cases of the milder forms of spermatorrhœa may be sometimes met with among us. So much of our article as relates to spermatorrhœa, we may be induced to communicate at a future period.—[*New Hampshire Jour. of Med.*

Some observations on Prolapsus Ani, and suggestions for effecting its radical cure by the methodical application of strong Nitric Acid. By Thomas Aickin, M.D., F.R.C.S.I., late Professor of the Practice of Medicine to the Apothecaries' Hall, Ireland.

The difficulty of effecting a permanent cure of the troublesome affection for which I venture to propose the line of treatment about to be described, is admitted by most surgical writers. Previous to the adoption of the method practised by the late Mr. Hey, nothing very effectual appears to have been done for its relief. A perusal of his cases, as furnished in his Surgical Observations, shows that they were of an aggravated character, and that certain structural changes had occurred in the tissues implicated in the habitually recurring displacement which may have rendered the excision of a portion of them, as practised by him, indispensable to their successful treatment. That cases of this description are occasionally met with, I am quite disposed to admit, having seen a few such instances myself, which, in other circumstances being favorable, I would willingly substitute Mr. Hey's method for my own. It may, however, be observed that the treatment here advocated as applicable to a large number of cases of prolapsus ani

is based on the same principles as those recognized by Mr. Hey, and most subsequent authorities who have adopted his method, or some modification of it. A prolapsus ani has been compared by Hunter, Monro, and other surgical pathologists, to an intussusception of the bowel, with certain differences which are very apparent. Rokitansky likewise compares it to a "volvulus without a sheath," and says that it is characterized by an inversion of the internal portion of the intestinal tubing, which he describes as follows:— "It represents a sausage-shaped or pyriform tumour, which is contracted at the anus, so as to form a pedicle, and at the free extremity there is in trifling cases a round central opening which, in larger prolapsus, assumes an eccentric position, and following the traction exerted upon it by the mesorectum, recedes, so as to present a mere fissure. The external mucous layer is the seat of inflammation and swelling, which partly proceeds from mechanical hyperæmia; partly from irritation produced by the atmosphere. It is the result of violent and lasting diarrhœa in children, or of blenorrhœa in adults and old people." It has been doubted whether all the coats of the rectum are ever protruded in a prolapsus ani. Such an occurrence, though rare, may, according to the testimony of several intelligent observers, occasionally happen. The protrusion beyond the sphincter of the extremity of an intussusception of the colon, or higher portion of the rectum, is alluded to by different writers, and this grave affection might possibly be mistaken for a prolapsus ani. Monro (senior) furnishes an interesting case of this description, and similar instances have been met with and described by others.

Prolapsus ani is, in the majority of cases, easily reducible, seldom demanding any very decided surgical interference for its temporary relief: indeed it occasionally proves rather unfortunate for the subjects of this affection that professional assistance is not invariably deemed necessary on its first occurrence, because the facility of its reduction leads to the impression that it is easily remediable, and therefore no effective measures are employed to prevent its recurrence. Hence many of these cases date from an early age, and it is not unusual to meet with persons who have for several years been subject to a protrusion of the bowel upon each evacuation. I have met with an instance of it in an old gentleman in his 75th year, when he first began to experience serious inconvenience from this malady, and who declared that he had been subject to it from his childhood. Recent cases of this affection, owing to the difficulty of their reduction, as also those of longer standing, either from their increase of bulk, or the supervention of severe hæmorrhoides, or ulceration and consequent hæmorrhage, may suddenly require surgical interference. I have known the delicate mucous surface of a recent prolapsus in a child, as also the tougher and more sensible covering of an habitual one in an adult, suffer considerable injury from rough and injudicious attempts at their reduction, the usual practice amongst nurses and

ignorant persons being to place a dry towel over the part, and to make forcible pressure upon it—a method in nowise calculated to relieve congestion or to overcome the resistance offered by a morbidly excited sphincter. The plan I have usually adopted with success in such cases, is to place the patient in the prone position, and if practicable, resting on his knees and elbows, and after smearing the part with sweet oil, I make gentle lateral pressure by enclosing it between the thumb and fingers, so as to diminish, as much as possible, its circumference, and thereby relieve the congestion, which is usually considerable. The pressure is then directed upwards in the axis of the bowel, and the reposition of the part carefully effected by following it with the finger. The latter practice is indispensable in old cases in which the descending portion has become more or less thickened and unyielding from repeated exposure or hæmorrhoidal excrescences. Monro gives some excellent instructions for the reduction of an obstinate prolapsus, which, as they are worth bearing in mind, I take the liberty of quoting.

He observes in his dissertation on "Procidentia Ani, Intussusceptio," &c.: "The bulk of the prolapsed part is often so great that it is impossible to make it all pass at once through the sphincter, and a fruitless attempt at reduction generally increases the swelling. The reduction ought to be made by pressing a small part of the sides of the orifice with a greasy finger, and when that part is thrust within the orifice, another finger is applied to what is then the verge of the orifice, to push it upwards, while the first finger is withdrawn; by such an alternate succession of the fingers, the whole may be introduced in most cases without incisions, so that this disease is seldom fatal, and for that reason the patient is generally too much neglected after the reduction, which is sometimes attended with bad consequences." (Monro's works, p. 671.)

Various methods have been devised in order to prevent the recurrence of the prolapsus, but for the most part without any very decided results. The older surgeons seem to have placed no great confidence in the measures they recommend for the cure of this affection. Thus, Heister, after enumerating several methods of cure, declares that "to effect a perfect cure in old cases occurring in persons of a weak or ill habit, is next to impossible. Compresses dipped in spirituous or astringent lotions, and retained *in situ* by the T. bandage, were chiefly recommended, but they afforded no protection against the descent of the bowel at the very time it was sure to occur. Hence certain ingenious mechanical contrivances were devised in order to obviate the recurrence of the protrusion during the act of defecation. To these latter it is needless to allude here, further than to remark that in surgery, as in some other sciences, the most ingenious contrivances are not invariably the most practical. Recent cases of prolapsus ani may be occasionally benefitted by local applications in the form of ointment or lotions, enemata administered for this purpose being

included under the latter class of remedies. The vegetable astringents are those usually employed, but Mr. Vincent states that he has found the injection of a solution of sulphate of iron the most energetic astringent in such cases. (*American Journal of the Medical Sciences*, new series, vol. xv.) The mere external application of these remedies cannot confer much benefit, whilst their activity as pharmaceutical agents necessarily limits their solutions, &c., to a strength not well calculated to ensure the desired local effect. I must confess that, after repeated trials of these remedies, I have not known any of them to confer decided benefit upon prolapsus ani occurring in the adult. It is indispensable to the success of whatever local treatment may be determined on for the cure of this affection, to secure a healthy and regular action of the whole intestinal tube. This may be accomplished in some cases by a carefully regulated diet, and when the use of cathartic medicines is indicated, the mildest should be selected; the elect. sennæ, either alone or in combination with sulphur, being perhaps the most suitable. An enema of three or four ounces of cold water, administered regularly a short time before bed hour, will be found to answer extremely well in some cases; and whilst it usually solicits peristaltic action, it seems well calculated to allay local irritation about the anus, and to induce a healthy tone of the sphincter.

Mr. Hey's mode of treating this affection is so well known, that it is needless to quote his description of it. I shall, however, adduce his reasons for its adoption, as furnished in his own words: "The relaxed state of the part (he observes), which came down at every evacuation, and the want of sufficient stricture in the sphincter ani, satisfied me that it was impossible to afford any effectual relief to my patient unless I could bring about a more firm adhesion to the surrounding cellular tissue, and increase the proper action of the sphincter. Nothing seemed to me so likely to effect these purposes as the removal of the pendulous flap and the other protuberances which surrounded the anus. I hoped that the inflammation caused by this operation would produce a more firm adhesion of the rectum to the surrounding cellular substance; and I could not doubt that the circular wound would bring on a greater stricture in the sphincter ani," &c., &c. Subsequent experience of the results of Mr. Hey's method has demonstrated the correctness of his views, for it is evident that the contraction of the cicatrices and consolidation of the coats of the bowel with the adjacent tissues, resulting from a moderate amount of inflammation, accomplish the most important part of the cure.

Mr. Abernethy adopted Hey's method, with some slight modification, especially in the treatment of prolapsus caused by hemorrhoidal excrescences, for the cure of which he proceeded in the following manner:—"The bowel being everted to the utmost by the efforts used in evacuating the fæces, and the parts cleased by bathing, the piles are to be seized with a double hook, of a breadth

corresponding to the length of the pile, which is to be drawn upwards from the bowel, and removed with the scissors. A protruded and thickened plait of the bowel is to be dealt with in the same way. The length of the incision should, both for the removal of piles and that of plaits in the bowel, be longitudinal in the direction of the bowel. A transverse fold of the bowel is therefore to be removed by taking away two elliptical portions in the long axis of the rectum, rather than to attempt its more complete removal by a wound made in another direction. After the operation, the patient is to remain in the horizontal posture, with the nates exposed, the parts surrounding the anus being frequently bathed with cold water, to check hæmorrhage or inflammation." (Abernethy's Surgical Works.)

It is certain that the radical cure of a confirmed prolapsus ani, whether complicated with hæmorrhoidal excrescences or otherwise, must be based upon the principles so clearly explained by Mr. Hey. Dupuytren's operation for the cure of this disease, is evidently an ingenious modification of Hey's, the requisite contraction of the orifice being more or less efficiently secured by the cicatrices following the removal of the marginal folds of integument.

Although the usual result of these methods is in general favourable, yet their immediate consequences are occasionally extremely inconvenient; and there are, no doubt, many patients who would willingly submit to treatment for this disease, provided it could be effected without the use of cutting instruments, but who continue to endure its many inconveniences rather than submit to an operation. Having already stated my belief, however, that the latter may be occasionally indispensable, I shall proceed to describe a mode of treatment which I believe to be applicable to a large number of these cases. We are indebted to the late Mr. Houston for the introduction of the use of strong nitric acid as an efficient remedy for the destruction of piles. It was observed some time after this remedy came into general use, that a considerable amount of constriction of the sphincter ani was not an unfrequent consequence of its application, which it was inferred might, in certain cases, induce a troublesome stricture.

Now, in all the cases of old prolapsus ani which I have treated, there was extreme laxity of the sphincter; and it is quite certain that unless the latter be stimulated to healthy contraction, the prolapsus must continue to occur. I found that the nitric acid was calculated to ensure this desirable result, and that its methodical application accomplished every thing that could be effected by the excision of a portion of the prolapsed part.

The history of the following case will, I trust, sufficiently explain the manner in which I have employed it. In the beginning of November, 1854, I was requested by a lady to prescribe for an attack of piles, which then proved troublesome. On inquiry, I found that this lady, who was of middle age and unmarried, had suffered from prolapsus ani for thirteen years, and that she had

latterly experienced repeated attacks of hæmorrhoidal congestion and irritation about the anus, along with strangury, and other distressing symptoms, which I attributed to reflex disturbance of the pelvic organs. After prescribing some of the usual measures without conferring much benefit, I proposed to employ a method for the radical cure of the disease, if, upon examination, such should be found advisable. I found that, after straining, a fold of the inner coat of the bowel descended for about an inch, and that there were three or four old congested hæmorrhoidal excrescences, about the size of small filberts, situated on the verge of the anus. The prolapsus was returned without any difficulty, but the sphincter was greatly relaxed, and she was obliged to remain in bed for some time after each descent of the bowel. The preparatory treatment consisted in effectually unloading the bowels by mild cathartics, after which a few leeches, followed by fomentations, were applied to the anus, and the patient was directed to remain in bed for a few days in order to obviate the recurrence of the local irritation, which was subdued by these measures. Having provided some strong nitric acid and some pieces of ice, I made use of them in the following manner: the patient was placed on her side, with the limbs well drawn up; Weiss' speculum was then introduced into the rectum, and its blades being divaricated, I dipped a bit of stick about the size of a common pencil, having a piece of rag tightly wrapped round one of its extremities for about an inch, into the nitric acid. This was directly applied between the blades of the speculum, in a longitudinal manner, so as to cover two hæmorrhoidal excrescences, and extend at right angles to the circular fibres of the sphincter, for about three-quarters of an inch, and was pressed firmly against the part for about ten seconds. I then took a piece of ice about the size of a man's thumb, having previously rounded off its asperities, and wrapping it in a piece of lint, introduced it between the blades of the speculum, which was then withdrawn. The pain, which was intense before the ice was introdced, ceased in three or four minutes, and the patient experienced no further local distress. An anodyne was, however, given at bedtime. After the lapse of two days there was some soreness, and a trifling discharge of blood from the part upon passing a dejection; otherwise, the ulcer left by the application of the acid caused but trifling annoyance. About half an ounce of weak black wash was thrown into the rectum by the vaginal syringe every night; and in about ten days a perfect linear cicatrix had formed. Its effect upon this prolapsus of thirteen years' duration being already apparent, the same process was now carried out upon the side immediately opposite to the cicatrix, and, after the lapse of a fortnight, the contraction of the sphincter not being quite satisfactory, a third application was made posteriorly, after which there was no further descent of the bowel, and the sphincter acted in the most satisfactory manner.

This patient has, up to this time, experienced no return what-

cver of the affection, whilst the troublesome reflex symptoms gradually ceased. My chief reason for employing the ice was to obviate the great suffering consequent on the use of the acid, and its anæsthetic efficacy was in this instance fully verified.—[*Dublin Medical Press.*

Sedative Powers of the Root of Yellow Jessamine. By Dr. CLEAVELAND, of Cincinnati.

For some time past the profession in the West and South have had their attention called to the root of the *Gelseminum Semfuvirens* or Yellow Jessamine, as possessed of very wonderful and valuable remedial properties; even those of the most opposite and contradictory nature having been ascribed to it.

The history of the discovery of its power is said to have been as follows: A planter of Mississippi, whose name is not remembered while laboring under a severe attack of billious fever, which had not yielded to the remedies used, sent a servant into his garden to procure a root and prepare an infusion of it for him to drink. The servant, by mistake, collected the root of the Yellow Jessamine, made an infusion of it, and gave it his master to drink. Soon after swallowing some of it, the planter lost his muscular power, so as to be unable to move a limb or to raise his eyelids; while he could hear and feel, and exercise his usual faculties as well as in health.

His friends became much alarmed at his great prostration, but after some hours he recovered his muscular powers, and was highly pleased to find himself free from fever. He soon learned from his servant what plant it was from which he obtained the root, and trying its effects upon the people of his own plantation and those of his neighbors, he ascertained that he had a valuable remedy for fevers. The use of the article became known to a quack, who prepared from the Gelseminum a nostrum which he styled the "Electrical Febrifuge," which was simply the tincture of the root of the Gelseminum, prepared with dilute alcohol, and disguised with the essence of winter-green.

After a time the true character of this tincture became known to the profession, and at the present time it is being used very frequently by many of this part of the country, who however seem, from their reports, not to have a very clear idea of its action on the system, or the class of cases for which it is indicated.

I have tested it uncombined with any other medicine, until I am satisfied that it is one of the most valuable *Sedatives* at present known to the profession—and peculiarly valuable, as it expends its force mainly upon those nerves that are distributed to the muscles of locomotion, leaving entirely unaffected the intellectual faculties, and probably the great ganglionic system of nerves.

We have in the *Aconite* a valuable sedative to the nerves of

general sense, or an anæsthetic to those nerves which, when infringed upon, cause the sensation of pain—a real *pain-destroyer*—so far as the superficial sensatory nerves are concerned—hence its value as an external application in all painful conditions.

In the *Veratrum Viride* we have an excellent sedative to the muscular system and to depress vascular excitement; but, while it depresses the Vagus nerve, decreasing the frequency of the contractions of the heart, and deadening the sensibility of the lungs, and thus relieving them of the sense of a *want* of breating, it also sometimes *deranges* the *gastric* nerves, producing such an amount of nausea, and even vomiting, as to preclude the further use of the remedy. It also not unfrequently induces such free catharsis as thus to greatly injure the patient if its use is continued.

These objections do not obtain against the Gelseminum, for while it proves a most powerful sedative to the nerves supplying the muscles of locomotion, as in the case of the planter who first took it, it never seems to produce the slightest effect upon the brain, or in the least degree to derange the stomach or bowels.

It *does* lessen the pulse and the frequency of respiration, and while it produces a wonderful relaxation of all the muscles, it relieves all sense of pain by acting upon the nerves of general sense, in a manner similar to Aconite.

Usually not more than thirty or forty minutes elapse after the agent is taken into the stomach before the sedative is experienced—and if the dose be not repeated, its influence will continue only for an hour or two. Many practitioners, however, seem not to be aware of this, and order doses, in my opinion, unnecessarily large, and repeat them only once in six or eight hours.

As yet the Gelseminum has been but little used, except in the form of a tincture prepared with *dilute* alcohol; but, as in the instance of its first trial, experience proves that the *sedative* property is fully soluble in water; and the experience of some in New Orleans, who made use of a tincture prepared with *strong* alcohol, would indicate that the root contained a dangerous resinoid substance, readily soluble in strong alcohol, but not soluble in dilute liquor or in water. Some *deaths* even occurred in that city, which were supposed to be produced by this poisonous resinoid principle.

The dose of the saturated tincture, with *dilute* alcohol, is from *three* to *thirty* drops, and I think it much better and safer to give small doses frequently repeated, than to risk a too large dose of a powerful sedative medicine.

I need not call the attention of your readers to the great variety of cases in which sedatives are indicated, and in which those that act as Lobelia or Veratrum do, on the stomach or bowels, are *contra*-indicated. Perhaps no other class of agents would be more frequently resorted to than these, did the profession feel sure they could command the agent which would produce the desired effect.

From sufficient personal experience, as well as from the observations of many physicians who have used this preparation, I am satisfied, that as a sedative to the nerves branching from the spinal cord, and going to the organs of locomotion—or the nerves of voluntary motion, and in a lesser degree the Vagus and sympathetic branches of nerves that are distributed to the heart and the lungs, inducing a less powerful and less frequent pulse, and a more sluggish and feebler respiration, the Gelseminum will prove highly satisfactory to any who may give it a trial.

It has had ascribed to it tonic, alterative, anti-periodic, anti-phlogistic, anti-spasmodic, diaphoretic, diuretic, and perhaps many other anomalous and contradictory properties; but, like the laudations of many foolish friends, so much has been said, that but little, if any, of these statements by many have been believed.

It *may* be possessed of other powers, but my most careful testing of the drug has revealed to me only its sedative powers.—[*American Medical Gazette.*

A detailed account of the results obtained from the local application of the Vapour of Chloroform by members of the Surgical Society and others. By S. L. HARDY, M. D., Examiner in Midwifery and Diseases of Women and Children, Royal College of Surgeons, Ireland; Physician to the Institution for Diseases of Children, &c.

A request having been made by the President on the first night of the present Session that any person who could give an account of the action of chloroform vapour as a local remedy would do so, I propose on the present occasion to show that this agent has been resorted to in the practice of several members of this Society, and that in their hands it has proved a valuable and efficient remedy.

I lately detailed in the Medical Press (November 15, 1854) a large number of cases in order to illustrate the action of chloroform vapour as a local application. Since appearing in that periodical, those cases have been published as a pamphlet. When speaking of the use of chloroform vapor in surgical cases, I made the following observations:—As a means of alleviating pain during operations, the application of chloroform vapour can be of service in but a very limited number of cases, and those only belonging to the minor operations of surgery, where the disease is superficial and the cuticle very thin or abraded." With the view of showing the efficacy of the vapour of chloroform in operative surgery, I shall first read a case for which I am indebted to the President. It is one of anthrax, which every practical surgeon knows to be a most painful affection. A case of a similar nature was presented to me by Mr. White,* a Licentiate of this College.

* For a report of these cases, as well as of the others read, see Medical Press of November 15, 1854, p. 307.

In those cases of anthrax, the cuticle being abraded, the vapour was enabled to act with much greater intensity than it could have done where no breach of surface had existed. They are, I think, most important, as showing that where it is desirable, as in the President's case, to dispense with inhalation of chloroform, its local application may answer all that is necessary; with this no small recommendation, that in so using it there is no risk of depriving the patient of life, no matter whether he be the subject of fright, or of cardiac, pulmonary or any other form of organic disease.

That operations in surgery may be performed without suffering to the patient by the use of chloroform vapour when applied locally, even where the cuticle is not abraded, cannot be better illustrated than by the following case, for which I have to thank Mr. Smyly.*

As many surgical dressings are very painful, and require frequently a good deal of tact on the part of the surgeon to overcome the restlessness or irritability of the patient, it is satisfactory to be able to quiet those sensations, both for the sake of suffering on the part of the sick, and for being able the better to resort to the means necessary for restoring health. Mr. Wilmot has enabled me to show, both from cases in which he has used chloroform vapour with this intention, and from his practical remarks,† that under such circumstances it is most beneficial.

On the Continent, where the local application of the vapour of chloroform has met with considerable attention, in the hands of M. Larrey it was also found of much use in surgical dressings.‡

The Medical Times and Gazette for August 19, 1854, p. 195, contains the results obtained by M. Conde, copied from a Spanish journal, also showing the efficacy of the vapour of chloroform in surgical dressings.§ The effect of chloroform on the pulse, when applied locally, as mentioned in this case, I have not observed, although having particularly attended to it.

Dr. Geoghegan has used chloroform vapour locally in cases of cancer, and made accurate notes of the effects produced by it.‖

Dr. Mayne, in employing it in a cancerous tumour of the neck, says: "I can confidently assert that the chloroform douche never failed to alleviate her sufferings temporarily."¶

Very remarkable effects have been obtained by the local application of chloroform vapour in tetanus. A case under the care of Dr. Kirkpatrick occurred in the North Dublin Workhouse, in the treatment of which chloroform was freely used. It is the more valuable, as very soon after I had an opportunity of witnessing the action of chloroform in its treatment; I had an account of even a much more important and interesting one under the care of Dr. Woods of Parsonstown.**

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* See Medical Press, Nov. 15, 1854, p. 307. † P. 308. ‡ P. 308. § P. 311.
‖ P. 308. ¶ P. 309. ** P. 305.

I have found chloroform vapour particularly useful in many neuralgic affections. The rapidity with which relief is obtained by it in some of those cases will be better understood by the following details.

The first cases that I shall mention are of toothache. Dr. Geoghegan came into my house as I was charging the douche for a young gentleman who was suffering severely from toothache. I asked the doctor to witness the result. Not more than half a dozen jets of vapour had been thrown into the tooth, when I asked if there was much pain? The gentleman said he was perfectly well.

One morning in the beginning of this week a girl asked me to relieve toothache for her. She had suffered a good deal, and was then in great pain. A few jets of vapour, as in the case just detailed, immediately removed it.

A patient who was taking mercury for a syphilitic affection, complained to me of very severe pain in his fauces, gums, and ears. He was at this time salivated. I directed him to close his lips on the tube of the douche, and fill his mouth with chloroform vapour, also to blow it into his ears and on the sides of his face. He did so and obtained relief.

A few days ago a lady, during an attack of influenza, complained of pain in the right side of her face, which distressed her very much. I applied chloroform by the douche, and she was immediately freed freed it.

I have received the notes of the two following cases from Mr. Forrest:—

An unmarried lady, who had been subject to hysteria from her 14th year, and had suffered during each month of February from severe neuralgic pain in the frontal region, was affected in the present month (February) with violent pain in the globe of her eye, which was followed by effusion of blood under the conjunctiva, and the integuments surrounding the orbit appeared as though a severe blow or contusion had been inflicted upon them. To relieve the violent pain chloroform vapour was applied. In fifteen minutes not only was the pain removed, but the congestion was greatly diminished.

The subject of the second case was a professional gentleman of the bar, ætat. 30, of studious habits, who, about two years ago, had suffered much from cephalalgia, which was cured by sulphate of quinine in doses of five grains taken three times a day. Lately he was seized with most excruciating pain in the globe of the eye, with profuse lachrymation and inability to separate his eyelids. The severity of the attack was so great that he hurried to his medical attendant who applied the vapour of chloroform. In ten minutes he could open his eye, and was free from pain. The surprise of this gentleman was very great at the immediate relief obtained from the chloroform.

Mr. Smyly has given me the history of a case of neuralgia,

which had resisted various forms of treatment, but readily yielded to the vapour of chloroform.*

[Dr. Hardy then read the case and a similar one by M. Bichât, and also a case of crick in the neck by M. Bernardet, for the details of which see Dr. Hardy's pamphlet "On the Local Application of Chloroform Vapour."]

The vapour of chloroform was applied alone in all the cases now detailed. With the exception of the first that I am next about to read,† those following were treated by the vapour of chloroform and warm water combined. The advantages derived from the combination of warm water vapour with that of chloroform, seem to me very important, particularly when the part subjected to treatment is not denuded of cuticle. The warm water vapour not only has itself a soothing effect, but by softening the integuments, renders the surface more susceptible to the action of chloroform.

I had an opportunity of seeing the subject of the second case of gout when taking a vapour bath. He told me that he had been for *twelve days* free from pain, owing to the relief obtained by the use of the chloroform and warm water vapour bath, and that for years he had not been so before. He described the sensations caused by the bath, as being most agreeable and pleasant. He had frequently applied chloroform on lint to his foot, but it had not benefited him in the manner that the bath had.

On Thursday last, Mr. Brown, resident-surgeon in Steevens' Hospital, gave me the history of two cases treated by the vapour of chloroform and warm water.

The first was that of a boy, who was under the care of Mr. Wilmot for morbus coxæ. In the treatment an issue was inserted behind the trochanter. Erysipelas, which was prevalent in the ward, attacked the part, and assumed the erratic form. It appeared successively on different parts of the trunk and lower extremities. In the course of the disease there was great pain in the instep and dorsum of the left foot. By Mr. Wilmot's directions a bath of chloroform and warm water vapour was given; the foot and leg, as far as to the knee, being enclosed in an India-rubber case. In fifteen minutes the boy expressed himself much relieved, and shortly after fell into a sound sleep.

The second case was osteo-sarcoma of the thigh. The patient, a boy, aged 15, suffered from constant pain in the diseased part, which was at first relieved by poultices, but after a time anodyne and various applications failed in procuring him ease. The vapours of chloroform and warm water were resorted to, and he expressed himself relieved.

In a letter which I had last month from Prof. Simpson, he mentions carbonic acid gas which he has found to be locally a stronger anæsthetic than chloroform vapour, and with a cooling, instead of

* See Dr. Hardy's pamphlet, p. 7. † See Medical Press, Nov. 15, 1854, p. 307.

a burning effect when applied to mucous membranes and raw surfaces; and in concluding his letter, he asks: "Have you tried it?" I have not tried carbonic acid gas locally as an anæsthetic; but from what Dr. Simpson says of its action, it is very desirable that it should meet with proper attention.

Were it necessary, I might bring before the notice of the Society many more cases illustrating the efficacy of chloroform vapour as a local remedy, but what I have already detailed seem to me sufficiently convincing, particularly as they are not the results obtained by one but by many persons, and several of them the members of this Society. It is not my purpose here to notice the failures that I from time to time observe reported of the vapour of chloroform as a local remedy. I am well aware that it has failed, and will and must do so, and that frequently, until experience has pointed out the cases to which it is suited, and prejudice has passed from before the vision of some who can understand nothing but what they themselves have introduced. Any one who has seen a late number of the Medical Press (December 20th) must be amused at the report which it contains of experiments made in London on local anæsthesia. Past experience, however, encourages us to hope that after a little the local application of chloroform will be found a valuable remedy by many. It must be well remembered how long it was before a late improvement which originated in this place made any way, or was found to answer the end for which it was applied in any other than in this city. Case after case was reported of success at home, while failures in other places were not wanting, until at length the industry, untiring energy, and ingenuity of the members of this Society, established beyond all doubt one of the most valuable additions to modern surgery—namely, the treatment of aneurism by compression. As it was in the treatment of aneurism, so it is in the local application of chloroform vapour; time and *proper discrimination of the cases to which it is applicable* will, I doubt not, ultimately establish this method of using chloroform. In bringing before the Society the subject of local anæsthesia by the application of chloroform vapour, my object to-night is to induce the members present to take a greater interest in it and to investigate it so fully as will enable us to resort to it and prescribe it with a greater degree of certainty in our practice. To prove that it deserves our most careful attention requires but little argument, when it is remembered how immediate are its effects in producing immunity from pain, how easy of application, and how perfectly free from risk both to the patient and the operator.—[*Dublin Medical Press.*

Upon Wounds of Arteries, and their Treatment. By Mr. Butcher.

The direction given in works on surgery to cut down to a wounded artery, and to put a ligature above and below the seat of injury, is good in itself, but not always practicable. When the

internal carotid artery is wounded by a piece of tobacco pipe thrust through the mouth, the common carotid must be the vessel tied. A similar necessity may exist even in wounds of the extremities, as has been shown by Mr. Butcher, F.R.C.S.I., Surgeon to Mercer's Hospital. We find, in the 'Dublin Quarterly Journal of Medical Science,' an account of a wound of the profunda artery; ligature of the femoral, below the margin of Poupart's ligament, by a transverse incision; arrest of the bleeding; death eleven hours afterwards. It was impossible to tie the artery above and below the wound, owing to its great depth from the surface; the main trunk was, therefore, secured by a ligature, the incision through the skin being made transversely, as previously practised by Mr. Porter, in consequence of the necessity of putting on the ligature so close to the crural arch.

The most interesting part of Mr. Butcher's communication is the narration of those cases in which he commanded hæmorrhage from a large vessel by means of well-adapted pressure. A policeman was stabbed in the leg: severe arterial hæmorrhage, followed by faintness, ensued. Mr. Butcher concluded, from the nature of the accident, that the posterior tibial artery was wounded. Graduated pressure, by means of a roller and compresses (7 or 8 pledgets over the situation of the would) was carefully exerted; the foot was raised; a compress and roller were applied over the popliteal artery, and a dose of morphia was administered: the limb was kept steady by a splint. On the following day, the pressure was removed from the popliteal artery and applied to the femoral, by means of an aneurism compress on the groin. The case did well; and Mr. Butcher, in commenting upon it, remarks that, as a rule, the surgeon should not seek for a wounded artery unless it be bleeding. A case of wound of the ulnar artery above the wrist was successfully treated by compression of the wound and pressure over the brachial artery; and profuse hæmorrhage from the hand after excision of the index finger, with removal of the head of the metacarpal bone, was completely controlled by powerful flexure of the injured limb, together with gentle pressure over both the radial and the ulnar arteries.—[*British and Foreign Medico-Chirurgical Review.*

Amputation of the Thigh in Civil and Military Practice. The Comparative success of Secondary Amputation. By RICHARD MCSHERRY, M. D., of Baltimore.

The great fatality which attends upon amputation of the thigh after gun shot wounds is evidenced by the fact, that, during the campaign in Mexico, under Gen'l Scott, there were no recoveries, so far as Dr. McSherry could learn, after the operation. This mortality is not peculiar to our country, as Mr. Ribes examined four thousand invalid soldiers, among all of whom he did not find one single instance of injury of the femur by shot, nor one who

had undergone amputation of the thigh. Malgaigne was equally unfortunate with all his cases during the Polish campaign. In civil life, the case is widely different. The statistical tables, published by Dr. Norris, state that during a period of ten years, of sixteen amputations of the thigh, performed in the Pennsylvania Hospital, fourteen recovered, and but two died. The two fatal cases were primary amputations, after fracture of the thigh and compound and comminuted fracture of the leg, respectively. Of the fourteen successful cases, seven were fractures (one ununited fracture of thigh), one tumor on the knee, and six caries of knee-joint. These results are favorable, Dr. McS. thinks, to secondary amputations.

In the Parisian hospitals, there were, in ten years, forty-four amputations of the thigh. Of these, thirty-four died, and ten recovered. All of these, however, were amputations after *traumatic* lesions. A comparison of these results exhibits, Dr. McSherry observes, that patients who undergo great operations, in full robust health, are more liable to perish than those who are subjected to them for chronic disease. There is abundant proof, also, that delay *is* advantageous. Dupuytren, in 1830, treated thirteen cases of fracture of the thigh *without* amputation; of these six recovered and eight died. Malgaigne reports five cases treated by himself, *without* amputation, of whom two recovered and three died. These results, compared with those in the same hospitals after amputation, (see ante,) show that the chances of life were greatest where the operation was not only deferred, but forgone altogether. Dr. McSherry considers that these facts show that the rule that the thigh must be amputated immediately upon fracture of the femur by shot, is a bad one, inasmuch as it requires certain destruction of the limb, without adding appreciably to the chances of ultimate recovery. When there is thorough disorganization of the limb from injury, the case, of course, is different. The *exception*, however, should not be made the *rule*.—[*Amer. Jour. of Med. Science.*

Hyposulphite of Soda in Inflammatory Rheumatism. By J. H. Warren, M. D., of Newton Upper Falls.

This preparation of soda is worthy of more notice as a remedial agent than is usually accorded to it by the profession. The following case will illustrate the value of the remedy:

Mr. C. had been ill for three days with inflammatory rheumatism when I first visited him. He had chills once in four hours. Tongue dry, with a dark, thick coat. Pulse 120, dicrotic; skin very dry; urine high colored and scanty, with brickdust sediment. All the joints very much swollen, inflamed and exceedingly painful. The pain was so severe that the walking of any one upon the carpet caused him to complain most bitterly. Ordered the following:—R. Hyd. chlor. mitis, gr. viij.; pulv. jalap., gr. xx.;

pulv. digitalis, gr. x. Divide into two powders, one to be taken once in three hours; followed by R. Nitrate potassa, gr. xv.; syrupi simplicis, f ℥ ij.; vin colchici sem., ℥ ij.; morphiæ, gr. ij. M. Sumat cochleare medium quarter horis. Externally apply R. Tr. aconite, gtt. xl.; acet plumbi, ℥ iij.; tr. opii, f ℥ j.; alcohol, ℥ vij. M. Bathe the parts with this mixture freely, applying cotton after each application.

2d. day.—Is no better; skin dry; knees, which are mostly complained of, very painful and badly swollen. Vomited twice through the night. Pulse 140, full. Passes urine more freely. Superadded pericardial inflammation. Cannot be moved. Countenance anxious. Breathing quick. Pain and some oppression about the cardiac region. R. Hyposulphite sodæ, ℥ j.; acet morphiæ, gr. ij.: gum acaciæ, gr. xx. M. Divide into six powders, one to be taken every two hours. Apply, externally, cloths wet in R. Hyposulphite sodæ, ℥ j., acid. acet. dil., Oss. M. Renewed once in three hours.

3d day.—Had a good night's rest. Tongue looks better; pulse 100; skin moist; urine free, not very high colored; swelling much diminished. Has but little pain. At his request let him sit up. Continue the same medicine.

4th day.—Pulse 88; swelling nearly gone; no pain; sits up. The same medicine continued.

5th day.—Tongue clean; pulse 80; walks about the room. Has some appetite. Give him chicken broth. Medicine continued. Two comp. cath. pills at night.

6th day.—No pain. Pulse 78. At his request let him go out. Medicine continued, with a little brandy and water.

8th day.—Discharged, well.

The fact most worthy of notice is the wonderful power of the medicine in exciting the secretion of the kidneys, when internally used. As an antiphlogistic agent, I have found it very powerful, and have used it externally where lead was objectionable, and some other agents of this class of remedies were useless.—[*Boston Medical and Surg. Journal.*

Production of Sexes.

The following are the views of Dr. Silas Hubbard, of New Hampshire, upon this interesting subject. Will any of our readers verify their correctness?

"In the Sept. No., 1850, of the Buffalo Medical Journal, I advanced the theory that males are conceived shortly before the time of the courses, and females shortly after; and now I propose to treat of this theory more fully, and to give my reasons therefor. My theory is, that there is generally a periodical development and maturation of an ovum near the time of the courses, and that said maturation usually bears the same relation to the time of the

courses in all women, and thus they are ordinarily more susceptible of impregnation shortly before and shortly after menstruation: and also that this susceptibility is nearly equal at both these times. My theory further is that the same ovum, if fecundated shortly before the courses, will generally grow to be a male, while if fecundation is deferred till after the courses, it will generally grow to be a female. If the maturition of the ovum bears a particular relation to the time of the courses, then it must be acknowledged that its condition must be very different before to what it is after the menses; indeed, a great difference can be seen, at different ages of its ripeness, with the microscope. It necessarily follows, then, that if fecundation occurs in one of these cases, the embryo will grow up to be a very different being to what it would in the other: that is to say, the ovum which grows to be a male is fecundated as soon as it is sufficiently mature to be impregnated, or while it is quite recent; but if its fecundation is postponed to a particular period later, it grows to be a female. I will not say that this rule relative to the maturition of an ovum near the time of the courses will always hold true, because rarely it is matured and fecundated during the intermenstrual period without any reference to the time of the menses, which is an exception to the general rule."

We find in the "Transactions of the Illinois State Medical Society," an exceedingly interesting Prize Essay by H. Parker, M. D., on the "Differences in the Physiological and Pathological action of that class of remedies called stimulants, of which alcohol is the type, and tonics, of which the bitter Barks and Iron may be considered as specimens." We regret that our limits will not allow us to reproduce the paper in extenso. The following are, however, the conclusions of the learned author:

"From a careful consideration of the facts and arguments now presented, concerning the nature of *vital* properties, and the modus operandi and physiological action of stimulants, of which I have considered alcohol the type, we may deduce in brief the following conclusions:

1st. That the elementary vital properties or forces of all living organized bodies, are in no way derived from any connection with the nervous system, but are inherent, distinct and peculiar. That they are susceptible to the impression of an agent, and capable of modification, independent of nervous influence.

2nd. That *nervous force* is a property or function peculiar to the nervous system, and like vital force, is susceptible of great modification.

3rd. That there may exist mental exhileration with increased nervous force, or excitement, and thereby a *sensation* of increased

strength and energy, while the *vital* forces of the tissues, tonicity and susceptibility may be simultaneously *diminished* or *depressed*; and hence,

4th. That increased nervous excitement, or a temporary exaltation of nervous force, is no index of the true condition of the vital forces, or any evidence of increased strength or vitality.

5th. That the muscular activity and vigor and the general "hardiness" of the system, is wholly dependent upon undisturbed healthy nutrition, and the due elimination of excretable substances from the body.

6th. That the popular belief, that the action of alcoholic stimulants is confined to the brain and nervous system alone, simply inducing mental exhileration and a temporary exaltation of nervous power, is not true; but that coincident with their action upon these structures, they exert in a variable degree, a direct and deleterious influence upon the component elements of the blood and tissues, with the ultimate effect of lowering the elementary vital properties of the body, tonicity and susceptibility.

This they accomplish in the following manner:

1st. By their great affinity for, and absorption of the oxygen of the blood, thereby interfering with its agency in the formation of plastic material, and impairing the organizability of those compounds designed for nutrition and reproduction. 2nd. By preventing or retarding that vital change—the *conversion of venous blood into arterial*, and diminishing the functional activity of the secreting and excreting structures generally, thus causing a retention and accumulation in the blood of effete and excrementitious compounds. 3d. By retarding capillary circulation and the metamorphosis of the tissues.

7th. That alcoholic stimulants diminish animal heat, and the exhalation of carbonic acid.

8th. That the popular notion that alcoholic stimulants promote healthy digestion and chymification, is not true, and therefore should be discountenanced and discouraged by medical men, not only as failing in this, but as destroying the natural sensibility of the stomach, and inducing morbid irritability and diseased action.

9th. That the stimulation and excitement which naturally follows the use of these substances, tends to destroy that harmony of action between the different organs and forces of the body, upon which their functional activity, and the continuance and maintenance of health depends. Finally,

"That alcoholic stimulants are the most unfit, and the least calculated of all other expedients, to impart strength and vitality to the human system, or enable it to resist the depressing influences of cold or hunger, fatigue or disease, or any of the various circumstances and events to which it may be exposed."

From a careful consideration of the physiological and pathological action of tonics, as now presented, I shall deduce the following conclusions:

"1st. That tonics are hæmatic medicines, and as such, are *restorative* in their influences; that, unlike *neurotics* and *stimulants*, they have no direct or special action upon nerve matter.

2nd. That they are not foreign to the blood, and may therefore remain in it; that they improve its quality, and the plasticity or its organizable material, assisting digestion and promoting assimilation and nutrition. Hence they are slow but permanent in their effects.

3d. That they exalt the tone of the muscular fibre; and hence by their use, "the pulse becomes fuller, stronger, and regular, and the muscular power increased,"—that they increase the cohesion and density of the tissues—diminish profuse secretions when dependent upon atony and debility, and finally, augment the vital forces of the system in general, thereby restoring *susceptibility* when defective, and the properties and functions of the nervous system to their normal condition."

Neutralization of the Syphilitic Virus, by the Perchloride of Iron.

In a report made to the "Administration of Hospitals" at Lyons, Dr. Rodet has communicated the composition of a liquid which possesses the property of decomposing the syphilitic virus, and thus preventing contagion. After numerous experiments made for the purpose of discovering some substance which would without cauterization, prevent contagion, this physician has fixed upon the perchloride of iron, and has deduced the following conclusions from his varied investigations.

1st. The most suitable dose of perchloride of iron and citric acid, is 4 grammes of each to 32 grammes of distilled water. By adding to this solution 1 gramme of hydrochloric acid, preservation from contagion may generally be secured. With 2 grammes of hydrochloric acid, preservation is more secure, and with 4 grammes still more so. The prescription would therefore be as follows:

Distilled Water,		32	grammes.
Perchloride of Iron, Citric Acid, Hydrochloric Acid,	aa.	4	"

A liquid endowed with properties almost identical, may be found by leaving out the citric acid, and increasing the quantity of hydrochloric acid one third, according to the following prescription:

Distilled Water,	32	grammes,
Perchloride of Iron,	4	"
Hydrochloric Acid,	6	"

This latter preparation is, however, slightly more irritating than the former, and therefore not as desirable.

2d. The most simple manner of employing this liquid is by dropping a drop on the part innoculated by the virus, and allowing it to remain there ten or fifteen minutes, or by placing upon the part a small piece of lint or charpie previously dipped in the prepara-

tion. If the liquid remains in contact too short a time the prevention of contagion is incomplete, and an ulcer makes its appearance which developes itself slowly and which may be regarded as an imperfect chancre.

The prevention of contagion will be complete if the lint or charpie is applied for an hour. Even a shorter time will probably suffice, but no inconvenience will be experienced if it is allowed to remain twenty-four hours.

3d. As soon as the liquid is brought into contact with the inoculated spot, the patient experiences a burning sensation which lasts, however, only for an instant. Immediately this spot begins to rise and assume the form of a papule which gradually extends from the centre to the circumference, and resembles the bite of a gnat. At the end of twenty or thirty minutes it ceases to spread; in two hours it commences to dry up, and after several hours no more trace of it remains. This blotch is an infallible sign that the liquid has penetrated into the point of inoculation, that it has passed into the meshes of the reticulated tissue of the skin, and that the virus which seems to insinuate itself into those parts more slowly, has been completely destroyed. In order to render the prevention of contagion certain, it is necessary that the blotch should acquire a considerable extent, and this is produced by the absorption of the liquid, hence the necessity of leaving the liquid in contact with the contaminated part a certain length of time.

4th. The prevention may be secured before the virus has produced any appreciable effect upon the part. At the expiration of two, four or six hours, the prevention is as complete as if the application were made sooner, provided the liquid has been allowed to remain sufficiently long in contact with the infected part.

If the inoculation has already produced any sensible effect, either a pustule or a papule, the liquid is not readily absorbed, the blotch does not form in a regular manner, and consequently the prevention remains incomplete. Cauterization with a fragment of solid nitrate of silver is then more sure and therefore to be preferred.

5th. The effects of this preventive liquid may be modified, not only by the quantities of active substances which enter into its composition, and by the duration of its contact with the parts affected, but also by the activity of the virus, whose effect it is intended to counteract. Weak doses which in some cases act as complete preventives against contagion, produce in others only an imperfect result. M. Rodet thinks he can prove that the syphilitic virus is much more active when it is derived from a recent chancre, than from one in a later stage. He supposes that the virus may renew itself by a new generation in the chancre; but that the soil in which it is implanted may become exhausted, or the chancre itself become so enfeebled that it can produce but slowly its first effects, and resist more feebly the neutralizing effects of the preventive liquid.

6th. This liquid seems to be susceptible of many other applications.

First. It modifies the simple chancre with a rapidity truly remarkable, destroying sometimes in twenty-four hours their property of secreting virulent pus.

Second. Vaccine matter is neutralized by this liquid in the most complete manner. This considered by itself is a matter of small importance, but it induces the hope that we may be able to modify the varioloid irruption and prevent the disfiguring marks which it sometimes leaves behind it by bathing with this liquid at an opportune time, the parts of the skin which we wish to preserve.

Lastly. Is not this liquid capable of neutralizing the virus of hydrophobia as well as that of syphilis and vaccine? If experience enables us to answer this question affirmatively, science will have made an important conquest. As this remedy does not cauterize the tissues, even suspected bites may be bathed with it without fear, while cauterization not only is rejected by a large number of victims on account of the dread which it inspires, but even when employed, does not always reach every part of the bite, and is not always successful in destroying the virus.—[*Jour. de Médecine et de Chirurgie. Charleston Med. Journal.*

Notice of a New Treatment for Venereal and other Discharges in both sexes, by the employment of large doses of the sub-nitrate of Bismuth. By M. E. Caby, Interne of St. Lazare.

The numerous cures, M. Moneret has effected by large doses of the sub-nitrate of bismuth in cases of diarrhœa, however obstinate, of dysentery and other maladies, induced me to apply the same treatment to venereal discharges, and the results, almost unhoped for, which I have obtained for some time, induce me to bring to the knowledge of my colleagues this method of cure.

1st. In Gonorrhœa, whether acute or chronic, in male subjects, I prescribe, three times a day, an injection prepared with a certain quantity of water with as much sub-nitrate of bismuth as can be held in solution. The patient retains it about five minutes. In no case has it produced the slightest pain; a result of the insolubility of the sub-nitrate of bismuth. The continuance of the treatment has been from four to ten days. A number of these instances had resisted every other kind of treatment.

2d. The treatment is different, although not less efficacious in vaginal discharges, whether acute, or chronic, or simple, or even connected with ulcerations or chronic inflammation of the os uteri. It consists in the application, by aid of the speculum and a simple pledget of lint, of the sub-nitrate of bismuth, dry and in powder. The only precaution is, to project a large quantity of the powder upon the osteri, and during the withdrawal of the speculum, upon the vagina and even on the labia. This application, producing not the slightest possible pain, should be made at least once a day,

taking care to employ an injection to remove from the vagina the powder more or less moist, which should be replaced by a considerable quantity of dry powder.

This very simple treatment, which requires the concurrence of no other therapeutic agent, and which occasions not the slightest pain to the patient, operates, especially among females, with a promptitude so great, that the next day copious discharges have almost dried up. Another advantage possessed by the sub-nitrate consists in the modification, as rapid as inexplicable, of the redness, and even of the ulcerations on the neck of the uterus.

I hardly venture to say that all discharges, without exception, can be cured in this way: yet the results, already numerous which I have collected and purpose soon to publish in a memoir on this subject, leave no doubt of the efficacy of the treatment. I am, moreover, convinced that this has been already demonstrated by the studies of many physicians.—[*Revue Med. Chirurg. from Monit. des Hopitaux*, and *Ibid.*

Early Exercise in Hip Disease or Coxalgia. By E. S. Cooper, M. D., of Peoria, Illinois.

My attention was first called to the benefits of early exercise in coxalgia by the following case, two years since.

Case.—Master John Fear, aged nine years, was attacked in the spring of 1852, with pain in the knee, which continued for some weeks, when it was ascertained that the seat of disease was in the hip, and his physician had him confined to bed, and kept in this position from the 1st of May to the 27th of June, when he was admitted into my institution.

I found him in the following condition: much emaciation; pain in the knee and hip; the foot of the diseased side projected two inches beyond the other, when they were placed side by side. Pressure on the heel produced an immediate reference to pain in the hip-joint.

Having already witnessed the benefits of early walking in white-swelling, the great relief from pain which exercise gives in these cases after the inflammatory symptoms have been principally subdued, and its invigorating influence upon the general health, I concluded that, inasmuch as keeping the joint quiet was the only object in confining patients to bed, generally, who have this disease, an apparatus might be devised which would secure the quietude of the diseased parts, and, at the same time, permit the balance of the body to be exercised, and which I was able to effect by a proper machine.

From the period of its application, the patient was more comfortable, particularly during the night. In fact the change was very striking, so much so, that from the most painful, sleepless nights, he passed to complete quietude during that period, interrupted by occasional paroxysm of pain, which were readily re-

lieved by an opiate. With this apparatus I could abduct the head of the thigh bone to the extent desired, and, by thus securing the ulcerating articular surfaces from pressure upon each other, and keeping the thigh bone from motion, while with the leg held in a state of flexion, the patient could exercise on crutches without the least detriment to the diseased limb.

The general health improved very rapidly, and the appetite became good, while the little fellow began to pass his time quite happily. About this period, however, his father removed him from town. I learned subsequently that he continued to improve after leaving me, and though I am unable to state whether he ever recovered entirely, I think no case occurring in my practice ever gave me more satisfaction at the time.

Since that, I have treated several other cases with similar results, and though some circumstance in each case has prevented me from witnessing the course throughout, there were none in which the patient did not begin to improve upon the application of the abduction splint. With one on the third day, he was able to press the foot of the diseased side upon the ground in walking, a movement which he had been unable to make for months previously. This case was Jotham Lyons, of Fulton county, Illinois, aged fourteen years, who had been attacked about seven months when he was admitted into my institution. I shall not give a history of his case in detail. Suffice it to say, that, though the symptoms progressed slowly, the disease had gradually advanced from the commencement, until after the application of the splints, since which he has been steadily improving up to the present period, June 16th.—[*Trans. of Ills. Med. Society. Medical Counsellor.*

On the Differential Diagnosis of Syphilitic and Non-Syphilitic Orchitis. By Thos. M. Markoe, M.D., Surgeon to N. Y. Hospital.

In order to contrast the two affections more fully, I will give the main symptoms in each, so that the data for a differential diagnosis may be compared at a glance. Thus, the—

Syphilitic form,	*Non-Syphilitic form.*
1. Begins in testicle.	1. Begins in epididymitis.
2. Smooth and regular.	2. Irregular and knobbed.
3. Hard and painless.	3. Less hard and more painful.
4. Scrotum unaffected.	4. Scrotum early adherent.
5. Both testicles involved.	5. Usually one only.
6. Hydrocele very common.	6. Hydrocele rare.
7. No suppuration or fungus.	7. Abscess or fungus common.
8. No glandular affection.	8. Glands of groin enlarged.
9. Venereal appetite gone.	9. Not ascertained.
10. Treatment successful.	10. Treatment unsatisfactory.

To complete the differential history of these two diseases, we may say that the syphilitic testicle tends finally, if not early cured,

to produce atrophy of the organ; while in the chronic simple orchitis, the tendency is to the disorganization of the testicle by abscesses, sinuses, or its entire protrusion in the shape of the fungous testis. Lastly, the pathological anatomy of the syphilitic disease is found to be, according to Ricord, an effusion and partial organization of fibrine on the fibrous surfaces and compartments of the organ; while, according to Curling, there is always found in the simple chronic orchitis, an abundance of the yellow, gelatinous, unorganized material, both within and without the seminiferous tubes, which he considers as the peculiar pathological element of the disease, and which is undoubtedly fibrine in an aplastic or unorganizable condition.—[*N. Y. Medical Times.*

Treatment of Chorea.

Sulphate of zinc is undoubtedly the remedy in most general use for the treatment of the ordinary forms of chorea in the London Hospitals. It is usually given in small doses at first (gr. j. to ij.) and gradually increased if the disease do not yield (gr. v. to viii.) Among other remedies in much esteem must be noticed the various preparations of iron, quinine, valerian, the ammonio-sulphate of copper, the iodide of zinc, and arsenic. In St. Thomas's Hospital Dr. Barker frequently prescribes, in severe cases, the last-mentioned remedy. He states that he has several times cured very quickly by its means, cases which had proved obstinate under other treatment. The dose is, of the liquor arsenicalis, three minims for a child, and from five to six for an adult, given in a bitter infusion three times daily. Chorea, in its more ordinary forms, is, as is well known, curable with tolerable certainty by almost any of the nervine tonics; hence the number of specifics which have been boasted against it.—[*Med. Times and Gaz.*

Vinegar in Scabies.

Professor Le Cœur, of Caen, recommends for the cure of itch, forcible frictions of the parts affected, with a hard sponge, soaked in good vinegar, performed thrice daily so as to penetrate the skin and rupture the vesicles. He has tried this treatment with the most complete success in ten cases. The average length of the treatment being less than five days. He thinks this treatment preferable to all others on account of its speedy action—its inexpensive nature—its freedom from unpleasant odours, and its easy application. He suggests that similar results might probably be obtained by frictions with the mineral acids dissolved in water.

[*Gaz. des Hop. N. Y. Jour. of Med.*

Papillæ on the Schneiderian Membrane. By Andrew Clark, M.D.

Dr. Andrew Clark exhibited some microscopical sections of the Schneiderian nervous membrane, demonstrating the presence of

papillæ. The first approach to the discovery of these bodies was sometime ago made by Mr. Quekett, who, in injecting the mucous membrane of the nose of a fœtus, observed that some of the capillaries were looped. Mr. Bowman subsequently observed epithelial sheaths in the field of the microscope, but could not find the papillæ. Dr. Clark has subsequently ascertained the presence of papillæ, confined to the upper part of the septum narium, to which the ramifications of the olfactory nerve are distributed. They were mostly single, and the epithelium was imbricated, the points of the scales overlapping in a direction towards the apex. The question as to whether they were organs of special or of general sensation could not yet be determined.—[*Virginia Med. and Surg. Journal.*

Congenital Absence of the Pericardium. By D. Bristow.

In a paper before the London Pathological Society, Dr. Bristow relates a case of congenital absence of the pericardium in a person who died with disease of the heart. The left pleura was contiguous with the pericardial sac, the heart lying in the cavity of the pleura, and adhering to the lung at various points. A slight rudimentary pericardium was connected with the right pleura, and opened into the left pleura by a small orifice.—[*Ibid.*

Single Kidney. By M. Labe.

In the Comtes Rendus de la Societé de Biologie there is an instance of absence of the left kidney reported by M. Labe. There was no renal artery or vein on the left side, and there was no trace of the left ureter to be found. The right kidney was hypertrophied and in its normal position.—[*Ibid.*

Sulphate of Quinine in Phthisis.

D. Muntendam, a Dutch physician, has just published a paper to show that, from his experience in twenty-two cases, sulphate of quinine, given along with acetate of morphia, or even alone, is capable of prolonging the life of the patient in many cases of phthisis, and that it may even effect a cure in those cases in which a tubercular deposition has just commenced, especially in married women and children. He alleges that, when given continuously in small doses, it does not cause dyspnœa, diarrhœa, headache, or any disagreeable effects; and he believes that in very many, but not in all cases of phthisis, it should be ranked as one of the best remedies for the disease.—[*Month. Jour. Med. Science.*

Borax Injections in Infantile Diarrhœa.

M. Bouchut considers infantile diarrhœa to be of two kinds; the one, symptomatic of lesions of the intestinal mucous membrane; the other, idiopathic, a nervous or catarrhal flux from the great

intestine, which may occasion death, without leaving any material morbid appearances. In the latter variety, M. Bouchut recommends clysters containing the bi-borate of soda, as peculiarly efficacious. This remedy proves as beneficial as it does in aphthæ of the mouth, it acts as a weak astringent on the intestinal mucous membrane, and as an alkali in neutralizing the acid secretions poured out by it, which lead secondarily to ulceration of the bowels, and especially of the anus.

He uses clysters containing from 10 to 20 grammes of the salt, in 125 grammes of water.

In cases of infantile diarrhœa symptomatic of intestinal ulcerations, M. Bouchut has found benefit from the use of borax, administered internally in the dose of 2 grammes, in 80 grammes of a mucilaginous emulsion.—[*Gaz. des Hôpitaux. Stethoscope.*

EDITORIAL AND MISCELLANEOUS.

BIBLIOGRAPHICAL.

A Practical Treatise on the Diseases peculiar to Women. Illustrated by cases derived from Hospital and private practice. By Samuel Ashwell, M. D., &c., &c. 3d American from the 3d and revised London Edition. Philadelphia: Blanchard & Lea. 1855. 8vo., pp. 525. (For sale by T. Richards & Son.)

This eminently practical work has passed the ordeal of criticism, and been received with general approbation by the profession. It is full and concise, written in good style, and may compare favorably with any work upon the subject in our language. Practitioners cannot be too well provided with such works, and should procure this if they have not already done so.

Surgical Reports and Miscellaneous Papers on Medical Subjects. By Geo. Hayward, M. D., late Professor of Surgery in Harvard University, &c., &c. Boston: Phillips, Sampson & Co. 1855. pp. 450.

This is a neatly printed volume, containing papers, most of which have already appeared in the periodicals of our country, but are now revised by the venerable author and issued in this convenient and permanent form. They are generally upon topics of interest and constitute valuable contributions to practical knowledge.

An outline of Medical Chemistry, for the use of Students. By B. Howard Rand, A. M., M. D., Professor of Chemistry in the Philadelphia College of Medicine. Philadelphia: Lindsay & Blakiston. 1855. 12mo., pp. 259. (For sale by T. Richards & Son.)

This is strictly speaking, an *outline* of the science of which it treats, and we think a very useful one to beginners in the study of medicine. Its perusal will give such a general idea of the subject as will much facilitate subsequent study.

An Essay to prove the contagious character of Malignant Cholera; with brief instructions for its prevention and cure. By BERNARD M. BYRNE, M. D., Surgeon U. S. Army. 2d edition with additional notes by the author. Philadelphia: Childs & Peterson. 1855. 8vo., pp. 160. (For sale by McKinnie & Hall.)

As cholera seems to be now domiciliated in the United States, we should neglect no opportunity to have the laws by which it is governed in its progress, as well as its curative treatment. The book before us seems to be conscientiously written by one who has had it in his power to study the disease, and is therefore entitled to attentive perusal.

Pamphlets Received.—We have to acknowledge the reception of the following pamphlets:

Lectures in reply to the Croonian Lectures for 1854, of CHARLES WEST, of London, on the Pathological Importance of Ulceration of the Os Uteri. By HENRY MILLER, M. D., of Louisville, Ky.

Cases of Polypus of the Womb, with remarks. By WALTER CHANNING, M. D. Boston.

On the Chemical Analysis of the Tennessee Collection of Urinary Calculi. By E. B. HASKINS, M. D. Tennessee.

Elkoplasty or Anaplasty applied to the Treatment of Old Ulcers, (a Reply to Dr. WATSON's Reclamation). By FRANK H. HAMILTON, A. M., M. D., Professor of Surgery in the Medical Department of the University of Buffalo, etc.

Anniversary Discourse, before the New York Academy of Medicine, delivered in Clinton Hall, Nov. 22d, 1854. By JOHN H. GRISCOM, M. D.

Address to the Graduating Class of the Memphis Medical College. By C. T. QUINTARD, M. D., Professor of Physiology and Pathology. Session of 1854–5.

Atlanta Medical College.—We learn that a reorganization of the Faculty of this Institution has taken place, and that it is now constituted as follows:

A. H. Buchanan, M. D., (of the Nashville University,) Professor of Anatomy; W. F. Westmoreland, M. D., Professor of Surgery; John W. Jones, M. D., Professor of Practice; Jesse Boring, M. D., Professor of Obstetrics; Joseph P. Logan, M. D., Professor of Physiology; Henry W. Brown, M. D., Professor of Chemistry; J. G. Westmoreland, M. D., Professor of Materia Medica and Therapeutics; S. W. Anthony, M. D., Demonstrator of Anatomy.

Resignations.—Prof. Wm. Gibson has resigned the Chair of Surgery in the University of Pennsylvania, which he has filled thirty-seven years. It is not yet known who will be his successor.

Prof. Horace Green has also retired from the New York Medical College. The Chair of Practice thus vacated has been filled by the election of Dr. Henry G. Cox.

Dr. R. La Roche has declined the Professorship tendered him by the

Memphis Medical College. We regret to learn that ill-health is assigned as the cause of the learned gentleman's declination.

Dr. Jno. S. Wilson writes us that Cod-liver oil may be deprived of its unpleasantness as follows:—"Wet the spoon with *sour wine*, then pour in the oil, and wash the mouth with the wine after taking the oil."

Minutes of the Annual Meeting of the Medical Society of the State of Georgia, held at Columbus, 11th April, 1855.

The Society met in the Division room of Temperance Hall, at 11 o'clock, and was called to order by the President, Dr. R. Q. Dickinson. The Secretary being absent, Dr. Ellison was appointed Secretary, *pro tem.* The roll was called, and the following members answered to their names:

Drs. Dickinson, of Albany; Dugas, of Augusta; Hammond, of Macon; Bell, of Houston county; and Stanford and Flewellen, of Columbus.

The minutes of the last meeting were read, and approved.

On motion of Dr. Flewellen, the regular order of business was suspended, and the following gentlemen—Drs. J. J. Boswell, S. A. Billing, F. A. Bowman, T. Stewart, T. W. Grimes, J. E. Bacon, J. A. Urquhart, T. J. Brooks, R. H. Lockhart, T. S. Tuggle, E. T. Taylor, E. C. Bellamy, —— Carriger, —— Blackford, T. C. Ellison, all of Columbus, J. S. Wilson, of Laurenceville, and J. A. Davis, of Albany, upon written application, were elected members of the Society.

On motion, the election of officers and delegates to the ensuing meeting of the American Medical Association was postponed until next day.

The Society then adjourned until 3 o'clock P. M.

AFTERNOON SESSION.

The Society again assembled. The President, Dr. Dickinson in the Chair.

An Essay, by Dr. Dugas, upon the Treatment of Strictures of the Urethra, was read, and ordered to be published.

The reading of an Essay, by Dr. R. C. Mackall, upon the Influence of the Culinary Art upon Health, was deferred for the present—as was also the Report of Dr. Word, upon Typhoid Fever in the State of Georgia.

The President having called for Reports from Committees, Dr. Hammond, one of the Committee appointed at the last meeting of the Society to ascertain the quantity of Opium sold and used in the third Congressional District of the State of Georgia, for non-medical purposes, reported—That he had found no possible means of ascertaining the correct quantity consumed, and begged that the committee be discharged, which, on motion, was granted.

The following Report, on the Finances of the Society, was read by the Secretary:—

TREASURER'S REPORT.

C. B. Nottingham, in account with the Medical Society of the State of Ga.

1854–'55.	To cash on hand 12th April, 1854,		$ 29 48
	" " from Initiatory Fees for 1853–'54,		18 00
	" " " Assessment " 1852,		10 00
	" " " " " 1853–'54,		105 00
			$162 48
By cash paid B. Brantly, and S. Rose & Co. for Advertising and Printing Circulars,		$10 50	
By cash paid Green, Barnes & Co.		62 00	
" " " for Envelopes,		1 00	
" " " Seals & Blain,		2 00	
" " " Columbus Enquirer,		5 00	
" " " for Postage,		46	
		$80 96	$ 80 96
" "	Balance on hand,		$ 81 52

C. B. NOTTINGHAM, *Treasurer.*

The Report was received, and referred to a Finance Committee, consisting of Drs. Hammond, Bell and Lockhart, who report as follows:

The undersigned, the Committee to whom were referred the accounts of the Treasurer, respectfully report, that they have examined them and the accompanying vouchers, and find them correct.

D. W. HAMMOND,
T. W. BELL,
R. H. LOCKHART,
} Committee.

After the transaction of some other unimportant business, the Society adjourned until 10 o'clock to-morrow.

APRIL 12TH.

The Society met according to adjournment, Dr. Dickinson in the Chair.

On motion of Dr. Flewellen, a committee of six, consisting of Drs. Dickinson, Hammond, Bell, Stewart, Lockhart, and Flewellen, was appointed to select Essayists and subjects for the next annual meeting. After consultation, they reported as follows:

1st. On the relation between Remittent and Yellow Fevers. Dr. R. D. Arnold.

2d. Diseases of the Cervix Uteri. Dr. J. A. Eve.

3d. On the connection of Pneumonia with Remittent Fever in the South. Dr. L. D. Ford.

4th. Upon the Diseases of the Spinal Marrow. Dr. C. B. Nottingham.

5th. Relation of Epidemic Dysentery to Remittent and Typhoid Fever. Dr. D. C. O'Keeffe.

6th. On the use and abuse of the Speculum Uteri. Dr. G. Harrison.
7th. The value of Diet in the Management of Diseases. Dr. G. F. Cooper.
8th. The Causes of Abortion. Dr. J. M. Green.
9th. Epidemic Diseases. Dr. J. F. Bozeman.

On motion of Dr. Hammond, it was—*Resolved*, That the Medical Society elect Honorary members, in or out of the State, at each annual meeting.

The Society then proceeded to the election of officers for the current year, which resulted as follows:

Dr. L. A. Dugas, President. Dr. D. C. O'Keeffe, Rec'g Sec'ry.
" J. J. Boswell, 1st Vice President. " F. C. Ellison, Correspond'g "
" D. W. Hammond, 2d " " " C. B. Nottingham, Treasurer.

On motion of Dr. Bell, a committee of six were appointed to nominate two delegates from each Congressional district, to represent the State Society in the American Medical Association. This committee, consisting of Drs. Dugas, Dickinson, Billing, Bell and Hammond, after consultation, nominated the following gentlemen, all of whom were duly elected:—

1st District, Drs. R. D. Arnold and C. West; 2d District, Drs. W. W. Flewellen and R. Q. Dickinson; 3d District, Drs. D. W. Hammond and T. W. Bell; 4th District, Drs. G. G. Smith and H. Coe; 5th District, Drs. H. V. M. Miller and R. C. Word; 6th District, Drs. C. W. Long and Jos. Le Conte; 7th District, Drs. D. C. O'Keeffe and J. M. Green; 8th District, Drs. Juriah Harriss and W. S. Jones.

The following resolutions, offered by Dr. Bell, were adopted:

Resolved, That the publication of the Transactions of this Society, in separate form, be hereafter dispensed with, and that in lieu thereof, such matters as it may be desirable to publish be furnished to the Southern Medical and Surgical Journal, for its pages.

Whereas, the adoption of the last resolution renders any assessment unnecessary:

Resolved, That none be made, and that all dues from members be considered cancelled.

A Committee of Publication, consisting of Drs. Boswell, Stewart and Ellison, were then appointed.

On motion of Dr. Steward, the Corresponding Secretary was instructed to open a correspondence with the Physicians of the different counties of the State, for the purpose of eliciting Reports on the history and treatment of the Epidemics of the present year, to be submitted at the next regular meeting of the Society.

On motion of Dr. Bell, the Committee on Amendments to the Constitution, were allowed further time to report.

The Convention then proceeded to elect an Orator for the next regular meeting of the Society, which resulted in the unanimous choice of Dr. W. W. Flewellen, of Columbus.

It was then determined that the next regular meeting of the Society be held at Macon, on the 12th April, 1856.

On motion, the Society adjourned.

F. C. Ellison, *Sec'ry pro. tem.*

Phthisis—Night Sweats of.—Give the following draught at bedtime: ℞. Acid. gallic. gr. vij.; morphiæ acet. gr. ½; alcohol q. s. (a few drops); syr. tolutan. ʒss.; aquæ. ʒj. The night pill of the Brompton hospital is as follows: ℞. Acid. gallic. gr. v.; morphiæ hydrochlor. gr. ½: mist. acaciæ. q. s. gtt. pil. ij. (Mr. Hutchinson.) Give gallic or acetic acid. Dip the night dress in sea-water, or salt and water, and dry it before using. But the best remedy is four grains of oxide of zinc at bedtime, combined with a little henbane or hemlock.

Cough of.—Mix one part of chloroform with three parts of spirits of wine, and let the patient inhale when necessary, but with caution, and under medical direction. The inhalation of camphorated spirit is often sufficient, or even the vapor of hot water, or infusion of hops. Sometimes frequent deglutition as the swallowing a little oil, will relieve the cough. Sometimes four minims of tincture of aconite is a good palliative.

Profuse Expectoration of.—To check this give creasote, pyro-acetic spirit, infusion of pitch, or balsam of tolu; but by far the best remedy is petroleum or Barbadoes tar, which often moderates the cough and expectoration remarkably.—[*Braithwaite's Retrospect.*

Death from Chloroform.—In the Medical Times and Gazette, Jan. 13, 1855, the following instance of this is recorded, which occurred in one of the English Provincial Hospitals:

A man, aged 18, of ruddy complexion, had chloroform exhibited in order to the removal of an encysted tumour from under the left eyebrow. During the inhalation the breathing became stertorous, and the inhaler was accordingly removed for a time. On a second application, after about half a minute's inhalation, a convulsive attack, resembling epilepsy, occurred; the man became purple in the face, and almost immediately died. All attempts to restore animation failed. At the autopsy, great congestion of the brain was found; the left ventricle of the heart was tightly contracted.—[*Medical News.*

Fissures of the Anus.—The Boston Medical Journal gives the following as a very valuable application to relieve, and sometimes cure, fissures of the anus, viz: ℞. Ext. Belladonna, iii. grs.; Ungt. Rosæ., iv. grs.—[*N. W. Med. and Surg. Jour.*

Scrofulous Intolerance of Light.—Prof. Mauthner recommends for this troublesome affection the application to the lids of the following, viz:

℞. Condii. ½ gr.; Sweet oil, ʒi. Mix, and apply with a hair pencil once or twice a day. We have frequently found a simple solution of morphine (4 grs. to ʒi. of water) effectual in similar cases.—[*Ibid.*

Nocturnal Seminal Emissions.—During the last two years much evidence has accumulated in the medical periodicals in favor of the efficacy of digitalis and digitaline in the treatment of involuntary seminal emissions. M. Laroche mentions a case, in the Gazette Médicale, of a very aggravated

character, which was cured by the digitaline in three weeks. The dose administered was equivalent to one grain of the pulverized leaves three times a day. We have repeatedly treated the same affections successfully with a mixture of equal parts of muriated tincture of iron and tincture of ergot, given in doses of thirty drops, three times a day, in sweetened water.—[*Ib.*

How to Test the Genuineness of Cod-liver Oil.—We possess in sulphuric acid a simple re-agent by which genuine cod-liver oil is easily distinguished from other kinds of oil. A few drops of this acid produce, in olive oil, a dirty, grey color; in poppy oil, a deep yellow color, approaching brown; and in ordinary fish oil, a deep brown color; while poured drop by drop into cod-liver oil, sulphuric acid produces in it a centrifugal movement, particularly where the drops fall, and, at the same time, a beautiful violet color, which changes to purple the moment the mixture is agitated, and ultimately to a rich sienna brown. This color is no doubt due to the action of the sulphuric acid on the constituents of the bile contained in the oil. The action of the re-agent is best seen by adding one or two drops of concentrated sulphuric acid to about half a teaspoonful of the oil, spread out upon a white porcelain plate.—[*Lancet.*

Vomiting during Pregnancy.—The tincture of Nux Vomica, in doses of four drops every two hours, is recommended on the very highest authority, as an efficient remedy in the distressing and often obstinate vomiting, which sometimes occurs in the earlier months of pregnancy. It is worthy of trial.—[*St. Louis Med. and Surg. Jour.*

Nocturnal Emissions.—The free use of powdered cubebs is alluded to, in a paper in the *Preuss Verein Zeitung*, by Dr. Deiters, as a very valuable remedy for the nocturnal emissions we meet with in cases of spermatorrhœa. We suggest a trial of this safe and simple drug under such circumstances. The same remedy is also highly extolled by him in incontinence of urine of children, whether caused by atony of the bladder or intestinal worms. We have recently succeeded in relieving the latter disease of many years standing in a young lady, by the fluid extract of Uva Ursi—it doubtless depended on atony of the bladder.—[*Ibid.*

Neuralgia.—An ointment of two grains of aconitine to the ounce of lard, has been employed by Mr. Hilton of Guy's Hospital, to alleviate the pain of this affection. One of those distressing cases of neuralgia following after amputation, was much benefitted by this ointment. Its great power should be always remembered in advising its use, and the patient cautioned as to the danger of venturing beyond his directions.—[*Virginia M. and S. Jour.*

New Remedy for Tape Worm.—Professor Osborne, of Ireland, recommends tannic acid for tape worm, on account of its known action on albumen and gelatine; he has seen them curled and contracted, and broken down, when expelled, after this remedy.—[*Western Lancet.*

Advertisements.—Exceptions having been taken by some that their advertisements, sent to this Journal, have not been inserted, we beg leave again to say that this publication is devoted exclusively to scientific purposes, and that it has no advertising sheet appended to it.

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ORIGINAL AND ECLECTIC.

ARTICLE XVII.

The Influence of the Culinary Art upon Health. By R. C. MACKALL, M. D., of Savannah, Ga. (Published by request of the Medical Society of the State of Georgia.)

The sum of human life is not made up of great, but of small things. Man, with all his boasted likeness to the gods, presents himself to the physician chiefly as a mere animal. In infancy, the most helpless of all creatures, his manhood is too often stained by the weaknesses of the first stage, and his old age is the yesterday of childhood returned. The few who reach "the lean and slippery pantaloon" are sad satires upon the God-like. The big manly voice forever gone, the staff and tottering gait are but a mocking of the first attempts to walk from chair to nurse.

The interlude between the chair and staff is a part of the same play, in which we witness a continued struggle between strength and feebleness—physical and moral. The single aim of man is selfish. The gratification of his passions and appetites is the goal of all his labors. To this end, hero and sage, artisan and serf, work. And, now, in the 19th century, the fields from which they cull their gratifications, present the same varieties to their tastes as were enjoyed by the classic, yet mortal ancients. The great of the past, were only great then, as now, when the world looked on. Then, as now, poet and orator, statesman and sage, disdained not to dwell upon the little affairs of life. Troy's historian could degrade the melody of his verse to a description of the vile cookery

of his countrymen, and the names Lentulus, Fabius, Cicero, assure us that even the masters of a world never forgot that they had stomachs. The fame of Cato smells of the kitchen, and Vitellius could get up a dish that a modern Frenchman would not attempt to rival.

If, then, the immortal Ancients would stop to tell us how to prepare a feast—we moderns—who almost eat as well as travel by steam—may well pause and look to our laurels in the regions where Toby and mamma preside,—notwithstanding a wise man has written, "put a knife to thy throat if thou be a man given to appetite," and a wit said in the teeth of the proverb, "*qu'un cuisinier est un mortel divin.*"

Now, although I cannot agree with either the Hebrew sage or the French poet, I sincerely believe that kitchen lore is too much neglected by the ultra utilitarians of our day and country. I am thoroughly satisfied that to this neglect we are indebted for a large amount of our work, and that if we had in every house in our broad land—if not one of Voltaire's "mortel divins," a well instructed cook—we might soon lay aside many of our vile compounds, and see disappear from before an unjaundiced public eye, a hundred quack certificates in favor of liver pills, etc.

American cookery in its influence upon health, bears about the same relation to the many varied forms of dyspepsia, as malaria does to our miasmatic fevers. The poison of the one is brewed in a pot or frying pan—that of the other in a fen or marsh. The swinish feast with which Penelope's suitors were regaled may indeed be found with all its classic taste and indigestive vileness in the modern cuisine, and often so much improved that those ancient lovers themselves would hardly recognise the noble dish.

Now, although physicians are not cooks, yet, as conservators of the public health, it is their duty to understand the art of cookery in its relations to the physiology of digestion. To the almost entire neglect of the kitchen, we have been for generations searching earth, air, rivers, ponds, marshes, etc., for causes of disease. This should have been done, but not to the leaving of the other undone. Unimpaired digestion would greatly assist us in all our labors, as it certainly would our unfortunate patients, even in the midst of malaria or the *absence of ozone.* And, although sound stomachs might not deprive epidemics of their subjects, they certainly would rob them of many victims; for if the prima via is in good order, the traveller has a tolerable surety against accident. Thus some of

the opprobriums of medicine would be removed, and the now wide field of quackery considerably narrowed.

In fulfilling the duty imposed upon me by the society, it will be my endeavor rather to attract laborers to the Augean work of clearing the kitchen and enlightening cooks, than to attempt the task myself. My effort will be to give a general view of the art of preparing food—to notice some of the abuses of the art, with the results which follow them.

Addressing my observations to physicians, it is unneccessary to enter into an elaborate argument to prove that there is a near connexion between the culinary art and health, or that the influence of the former upon the latter is not beneath our consideration. But, in order to exhibit this fact so as to attract special notice, it may be well first to turn the picture, holding up to your view the relations between the abuse of the art and disease.

Man being an omnivorous animal, his stomach is by nature fitted for the digestion of every thing that is good for food—indeed, for many things not food, physiologically considered. From earth, sea and rivers, he gathers the thousand articles he feeds upon. Nature has been lavish in her provisions for his wants. But although she thus amply provides for his varied taste and capricious appetite, she has not for him as for the brute prepared her bounties for his organs or digestion. To reasoning man it is left, either to be satisfied with a few of the fruits of the earth, or to devise modes by which to render the animal and vegetable kingdoms subservient to his desires.

With the gift of superior intelligence, she has made him the custodian of his own powers, subject only to her laws, for the violation of which she holds him strictly responsible. Yet, ever generous, she has provided him with more than one sentinel to guard the approaches to the castle of his health, and in the castle itself, has placed a faithful keeper. With ever ready wit, corporal smell and sergeant taste, guard, the one the out post, the other the entrance, whilst private nausea, even to the wall, strives to cast out every rude invader. Yet, notwithstanding nature's lavish kindness, and too often in spite of sentinels and keeper, the castle is entered successfully and its walls sadly injured. Thus man becomes a vandal to his own stomach, invading it with reckless violence, until its integrity is destroyed, and, in revenge, it curses him with disease for the residue of his days.

But, in our own day and country, I believe, more harm is done to this vital organ through ignorance than through indulgence in pampered appetites. Particularly is this the case in our own State. Almost exclusively an utilitarian people, our masses are too much bent upon the acquisition of wealth, to stop to enjoy it, much less to attend to laws of nature; which education and prejudice have induced them to believe are only the rules of refined luxury and effeminate fashion. This is true, not only of the lower and middle classes, but of many among the wealthy. In all their gettings they have not taken Solomon's advice and gotten wisdom. The antipodes of the man of pleasure, they forget, there is a present, and live for an imaginary future. With this class, a life time is not too long to devote to the acquisition of gold—but one hour in twenty-four is too much to waste upon that, which alone can enable them to enjoy it. It is ten minutes to a dinner, and hours to a bargain.

Nor does this dinner, thus swallowed, not eaten, cost them a moment's thought before it is upon the table. The fowl is in the yard, the mutton in the field in the morning and upon the dish at noon. Quantity, not quality, is all they demand of their "mortels divins" (shades of Voltaire forgive me). Les cuisiniers of the poet are as much wanted over our land as schoolmasters. Hardly less to be feared is the frying pan of old Cato, than the ignorance of the voter, a rebellion in the prima via being as much to be dreaded by the individual as a fight at the husting by the body politic.

I now proceed to the consideration of some of the most important changes produced in food by different modes of cooking, the effects of those changes upon the digestibility of various articles of our ordinary diet, and consequently upon health. Nearly all our various articles of food having an organized texture, require the agency of heat to prepare them for digestion. The exceptions to this rule are oysters and some of the fruits. Dividing, for our present purpose, the different modes of cooking into boiling, stewing, roasting, broiling, baking and frying, I will take them up as named.

Boiling is probably the most common method of preparing food for the table. If properly conducted, it is a process well calculated to render both flesh and vegetables digestible. The action of heat applied through the medium of water, the temperature of which has been raised to 212° Fahr., upon the fibrous texture of butchers' meat, fowls, or fish, is to soften the fibre, and separate the fibres from each other, and from the other tissues. "The albumen of

meat being partly solid, partly liquid, the latter is coagulated by boiling water. By the united agency of water and heat, a portion of albumen, or at least a nitrogenous matter, is rendered soluble, and is therefore contained in the broth. The hematosin or coloring matter of the blood dissolves in, and sometimes communicates a red color to cold water, but as soon as water becomes sufficiently heated, the hematosin coagulates and forms brown floculi, which float on the top of the liquor, and constitute part of what is called the scum. The cellular tissue, the bones, the aponeuroses, and the tendons, yield by boiling in water, gelatine. The fatty matters melt, and, except when they are contained in closed cells escaping from the meat, float on the top of the broth. The nervous or cerebral fatty matter which principally constitute the pulp of the nerves, is softened by the heat and is in part carried off during the process." During the process of boiling several products are formed by chemical reactions yet unknown to us. We have creatine—so called by its discoverer, Chevreul—nitrogenous and crystalizable, and insoluble in alcohol. Osmazome, an extraction and highly odorous substance. Ammonia, a sulphurated compound, a volatile acid, similar to butyric acid. Boiled meat, then, consists of fibrine, coagulated albumen, gelatinous cellular tissue, fat, nervous matter and water. It has given out to the water, gelatine, albuminous matter, creatine, extractive matter, lactic acid, salts, and a little fatty and saccharine matter. By boiling, therefore, meat loses a portion of its nutritive properties, but at the same time it parts with some of its least digestible components. If, however, the process is properly managed, the actual loss will be trifling; for, if the meat is put into the water when it is already boiling, the albumen upon and near the surface immediately coagulates, thus closing the pores, and in a great measure preventing the escape of the juices. On the contrary, to make soup, the meat should be put in the cold water, so that gradual application of heat will dissolve the soluble matters and extract them from the insoluble fibre, tendons and bones. Again: overboiling is injurious to some articles of food, rendering them both less digestible and less nutritious. "When gelatine," says Pereira, "is submitted to prolonged ebulition, or to a temperature exceeding 220° Fahr., it undergoes important changes. It evolves ammonia, becomes syrupy, loses its characteristic property of forming with water a jelly, and very speedily undergoes putrefaction. Thus altered, it has a disagreeable flavor, and its nutritive properties are greatly de-

teriorated, if not altogether destroyed. It is less digestible and readily deranges the digestive organs."—(Food and Diet.) Underboiling, of course, fails to effect the main object of the process, viz: to render the fibrous textures tender and to separate the fibres so that they may be more easily permeated by the gastric juices.

Stewing is boiling with a small quantity of water. The process is the same, but the results somewhat different; for, as stewing is usually conducted in a closely covered pan, there is little or no escape of nutritive or other principles of the articles submitted to it. The albumen and gelatine are dissolved and separated from the fibres, whilst the latter are thoroughly separated and partially broken down. A gravy is formed, containing a portion of fat and osmazome, to which it is indebted for its richness. By stewing, many wholesome and savory dishes are made, yet it is not a mode of cooking to be recommended to the dyspeptic.

Roasting, is probably, of all the various methods of preparing food, the best, both to preserve its nutritiousness and render it digestible. It is the most ancient as well as the most simple mode of cooking animal food. "The spit was probably an early cotemporary of the altar and sacrifice," says old Frederick Accum, "ere the iron age had taught men the use of metals, these roasting instruments were made of wood, and, as we find in Virgil, slender branches of the hazel tree were particularly chosen:

> "—— Statit sacer hircus ad aram,
> Pinguia que in verbus torrebimus extra eolurius."

The chemical changes produced in meat by roasting are slight, but important in a culinary point of view. The watery juices, as the heat penetrates the fibrous textures are rarified, and escape in the form of steam. The albumen coagulates. "The gelatine and the osmazome become detached from the febrine and unite with the fat, which also is liquified by the expansive properties of heat. The union of these forms a compound not to be found in the meat previously. This is retained in the interstices of the fibres, where it is formed, by the brown frothy crust, but flows abundantly from every pore where a cut is made into the meat with a knife."

Chemistry has demonstrated that roasted meat owes its peculiar odour and taste to the development of the principle called osmazome, a substance distinguished from all other constituents of animal matter, chemically, in being soluble in alcohol—and to the senses, in being extremely savory and sapid.—(Accum.) "Osmazome exists in the largest quantity in the fibrous organs, or

combined with fibrin in the muscles, while the tendons and other gelatinous organs, appear to be destitute of it." But a portion of the effects produced upon both meat and vegetables by roasting is entirely mechanical. The expanded juices separate the finest fibres, cellular tissue, nerves, blood-vessels, etc. The starch grains of vegetables are split and the meat turned out light and dry. But roasting, also, must be conducted fairly. If the heat is applied too quickly the meat will be scorched outside and raw within; if too slowly, the rich juices will have time to escape ere the brown crust is formed. The saddle joint, or fowl, should be neither over, nor underdone; it should be exactly done.

Broiling differs but little, chemically, from roasting. The meat being cut into small pieces, and exposed to a quick fire, the albumen of the surface is rapidly coagulated—thus preventing the escape of the juices. Hence, broiled meat is extremely savory. To a delicate stomach, it is somewhat less digestible than roasted meat. Baking is roasting in a closed oven, and is objectionable on account of the empyreumatic oil which is formed by the decomposition of fat, and not allowed to make its escape. Baked meats are apt to be dry and hard, unless the operation is well conducted. Potatoes, baked, are less nutritious than boiled, as has been demonstrated by experiment on prisoners in the Glasgow Bridewell. The fact I am at a loss to explain, unless, by boiling, the starch cells are more completely broken up.

Lastly, we come to frying, the most decidedly objectionable invention of the cuisinier. "The effect of frying, upon meat, is peculiar and easily distinguished from all other modes of cookery." The meat is deprived of its own nutritious juices, in part of its gelatine, albumen, and osmazome, and then saturated with boiling fat. This boiling fat gives off carbonic acid gas, a little inflammable vapor, and an acid volatile oil, called acroleine or acroleon, whilst the fatty acids are in part set free.

I next come to consider the staff of life. Bread making—the true art of which is probably less understood than any other branch and distressed by salt or sour masses of dough, misnamed bread, of ordinary cooking; for so often has my own stomach been shocked not to have realized this fact. Well would it be for our successors on the stage of life, if American daughters were as thoroughly instructed in this branch of housewifery as they are in less useful arts. An occasional hour might well be spared from the music

stool, for the study of "Miss Leslie's Complete Cookery;" and even Euclid—now, I believe a text-book in our female colleges—might be laid aside, with advantage, for the dough-tray and rolling-pin. The ordinary loaf, or fermented bread, is prepared from wheaten flour, salt, water, and either yeast or leaven. Bakers often add potatoes and alum. The yeast or leaven causes the sugar of the flour to undergo vinous fermentation, the result of which is the formation of carbonic acid gas and alcohol. The latter is driven out upon the application of heat; the escape of the carbonic acid being prevented by the tenacity of the dough, the latter becomes distended with gas, puffs up, assuming a vesicular texture, forming, in the language of the bake-house, the sponge. Now, if this vinous fermentation is suffered to continue over a certain definite period, the dough becomes sour, owing to the formation of acetic and lactic acids; if, on the other hand, the sponge is put into the oven too soon, fermentation is checked before the loaf is light. It is therefore an important point to arrest the fermentation exactly at the right moment. After baking, bread is found to weigh from 28 to 32 per cent. more than the flour used in its preparation. "In the formation of wheaten bread," says Sir H. Davy, "more than one quarter of the elements of water combine with the flour; more water is consolidated in the formation of bread from barley, and still more in that from oats; but gluten in wheat being in much larger quantity than in other grain, seems to form a combination with starch and water, which renders wheaten bread more digestible than other species of bread." Potatoes used in making bread assist fermentation, but containing less gluten than wheat, are less nutritious. According to Vogel, wheat bread is composed of starch, dextrine, sugar-gluten, together with carbonic acid, chloride of calcium and chloride of magnesium. Leibig states that 100 parts of fresh bread contain, on an average, 30.15 parts of carbon.

Of unfermented breads, the common buiscuit need only be referred to. This is made, ordinarily, with milk and water, salt, and butter or lard. These ingredients, well mixed, form the dough, which is kneaded or beat, until a gaseous or volatile body is set free within it. This body being expanded upon the application of heat, renders the bread light and cellular. If not well kneaded, buiscuits are heavy and unfit for the table. In England, several patents have been taken out for unfermented bread. The secret of the lightness of these patented articles, depends upon the reac-

tion between muriatic acid and carbonate of soda—chloride of sodium being formed—water and carbonic acid gas. This last product being set free, distends the dough and lightens the bread. Over fermented bread, biscuits possess several advantages. They are less troublesome to make, occupy less time, and are light and digestible, without the risk of being spoiled by carelessly timed fermentation, or bad yeast.

But I will not consume the time of the Society by further details, dismissing bread, with the single remark of Dr. Paris: "All pastry is an abomination."

Having thus endeavored to give, as concisely as possible, an outline of the chemistry of cooking, or the changes produced in food by the agency of heat, I pass to the consideration of a few of the relations between these changes and digestion, and their consequent influence upon health.

Our food being cooked and placed before us, the *second* step towards digestion, is mastication. If it is an important matter to the well-being of man, that his culinary operations should be carefully conducted, according to the strictest rules of the art, it is scarcely less important, that he should give his individual attention to the agreeable task of mastication. Now, although the pleasures of the table are most ungodlike, I do not see why a necessity should not be made a rational enjoyment. I have already alluded to the steam-like rapidity with which Americans dispatch their food. Against this habit, so universal throughout the country, we, as physicians, should wage a daily, and eternal warfare. We should struggle to convince our patrons, that time is of less value than health. That teeth are not superadded, but essential organs; and that nature has not provided the human species with the gizzard of the goose, although she may occasionally misplace the head of Rome's faithful sentinels. But, to return to my subject: Thorough mastication not only minutely divides, but at the same time mixes the food with the salivary secretion,—an important adjuvant to the gastric juices. Indeed ptyeline alone possesses a certain solvent power over several proteine compounds.—Mixed with saliva we have next to observe the food in the stomach, presuming it to be scientifically cooked and rationally masticated. Here for a time it undergoes no change. In the meantime the gastric juices are being poured out and are slowly penetrating the yet crude mass. Presently we can see the differences made in the

kitchen. To that lucky chance for science, Beaumont's Canadian, we will give a choice bit of broiled venson, and watching through the window accident has made for us—we find that in one hour and thirty-five minutes the steak is ready to pass the pylorus. Next, we may tempt him with a slice of boiled beef—and this we find digested in two hours and forty-five minutes. Again, we give him fresh beef, fried, and three hours are required for its digestion. With eggs he is indulged in a variety of forms—raw, they digest in two hours—roasted, fifteen minutes longer is necessary; soft boiled, in three hours—and hard-boiled or fried, in three hours and a half. Thus I might go on through these valuable tables of Dr. Beaumont, but they are so well known I need only refer to them.

Now, this Canadian boy, notwithstanding the misfortune which made him a martyr to science, was in good health, with unimpaired digestive powers; otherwise, I doubt not, other and widely different tables would have been made from Dr. Beaumont's experiments. If, for from twenty to thirty years, he had daily bolted fried bacon and eggs—cabbage half boiled in company with bacon—beef fried in lard, or baked crisp—fowls boiled whilst still fluttering, etc.—I feel well assured that the watches of my old friend would have been greatly prolonged. Upon how many of our patrons do you suppose like experiments could be made with like results, supposing their stomachs as accessible as was the Canadian's? But few Americans pass the prime of life without suffering from impaired digestive organs. Dyspepsia in all its varieties shortens the average of life. The nutritive properties and digestibility of much of our food is injured before it enters our stomachs. After a labored digestion it passes into the small intestines, probably in company with yet undigested portions. The mucous membrane is irritated, and cannot continue the process begun in the stomach. The chyliferous vessels refuse to absorb—the muscles of the intestines, irritated, contract—and the chyme and chyle with the crude mass—are hurried onward, and the hungry man eats, but is not satisfied. The stomach of the hardy countryman is indeed a wonderfully vigorous organ. Long may it resist serious injury from the daily attacks upon its integrity; but, after a longer or shorter time, it must complain. The victim of reckless cookery and telegraphic meals, is slow to realize that he is a diseased man. The robust farmer who can boast "I never knew a day's sickness"—who has only heard of dyspepsia as a city fash-

ion—can hardly be persuaded that his "heart-burn" is disease, and his faithful old cook, assisted by his own habits, the cause of it.

But, gentlemen, it is our duty to teach them the truth, even to the disgrace of Cato, or the anger of ignorance.

ARTICLE XVIII.

Surgical Cases. By JUDIAH HARRISS, M. D., of Augusta, Ga.

CASE I. *Excision of an Atheromatous Tumor.*—The patient was a negro man, from Burke county. The tumor was situated on the right side of the vertebral column, just below the level of the superior angle of the scapula, and had attained the size of a hen's egg. The surrounding tissues were considerably indurated, which made the tumor appear larger than it really was. It had attracted the attention of the patient twelve or eighteen months; had ulcerated three months prior to my seeing him, and continued to discharge pus through a small fistula. The ulceration probably occurred in this case in consequence of the friction of his clothes when at work. The tumor was removed by making an incision over the centre, and dissecting it out with the sac. The wound soon healed, though the surrounding tissues remained indurated for some time. This induration was doubtless induced, and probably kept up, by the irritating friction of the clothes. Anæsthetics were deemed unnecessary.

CASE II. *Injury of the Hand—amputation of Finger.*—An Irishman, employed at one of our machine shops, had his hand injured by a circular saw. The wound extended from the middle of the dorsum of the hand, down between the middle and ring fingers to the palmar surface. The metacarpo-phalangeal articulation of the middle finger was widely opened, the head of the metacarpal bone being very moveable, showing that it had been severed from its body. The middle finger was also extensively injured. Its first phalangeal articulation was cut into, and the bone of the first phalanx split through its entire length and one half thrown off; the other half was very loosely attached.

Of course the finger could not be saved, and an amputation was immediately performed. An incision was made from the angle of the wound found on the dorsal surface, down between the mid-

dle and index fingers, to meet the wound upon the palmar surface. The head of the metacarpal bone was next removed, as it was found completely severed from the body of the bone. The digital artery cut during the operation was secured, but as the other did not bleed, it was not tied. The hand was then bandaged, so as to bring the lateral flaps in apposition, and placed in a sling.

About fourteen hours after, I was called to him in consequence of hemorrhage from the artery which had not been ligated. This accident was probably induced by the hand being removed from the sling while the patient was asleep, or from allowing it to hang. The bandages were simply applied more tightly, and the hand placed upon the opposite shoulder, with a broad bandage passed around the body and over the arm, so as to confine it. There was no further accident, and the hand was soon well, with but little deformity. No anæsthetic was administered.

CASE III. *Hydrocele.*—A negro man, about 60 years of age, was sent from an adjoining county to be operated on, if necessary. The left side of the scrotum was greatly distended, hard and firm, which state had existed about two years. Fluctuation was very soon detected by palpation, though the tumor was not at all translucent when tested with the candle. No shock could be felt by applying the hand to the tumor and requesting the man to cough. The enlargement was decided to be hydrocele, for the reasons, that the tumor had existed for two years; was very gradual in its progress; was unattended with pain, until its volume became so great as to induce this from its weight; that there was no diminution in size when in the recumbent posture, and that fluctuation was very perceptible. In addition, the negative signs were conducive to that opinion. Such a tumor is most apt to be confounded with hernia; but the absence of the shock on coughing, and the fact that the tumor was no larger at one time than at another, in addition to the signs already stated, precluded the probability of hernia. The fact that the tumor, though hydrocele, was not translucent, was accounted for by the following considerations: that the inflammation was of two years standing, consequently chronic, and had induced a considerable thickening of the tunica vaginalis; that the negro was very black, and the pigmentary deposit must have been sufficiently thick to obstruct to a certain extent the passage of the luminous rays. The tumor was so large as to force the right testicle very nearly up to the abdominal ring, and made

the penis appear to pass from under the pubis, several inches below the point from which it really did.

At the operation, about a quart of milky fluid was drawn off through the canula of the trocar. The sac was then injected with tinct. iodine, 1 part; water, 2 parts. The injection was thrown into the sac twice at the same sitting, and each time retained three minutes. The amount of injecting fluid was large, because the tumor was of great volume, and it was desirable to have enough to distend the sac, and to come in contact with the whole surface. The sac was injected twice, and the solution made unusually strong, in consequence of the fact, that the tunic was altered in character and very much thickened by the chronic inflammation, and hence a greater amount of irritation was necessary to cause adhesion than if it had been of recent origin. M. Velpeau not only recommends two injections, but advises the operator to leave a small portion of the iodine solution in the sac. This, he says, is to insure the requisite amount of inflammation, and adds that it does not and cannot produce, any injurious effects.

On the day succeeding the operation the effusion of serum was very large, greatly distending the sac, and showing that the inflammation was, in all probability, sufficient to induce a cure.

The patient was retained here about two weeks, and I have since learned that he has entirely recovered. No anæsthetic administered.

CASE IV. *Diseased Testicles and Hydrocele.*—A German, æt. 24 years, called upon me to treat a chancre, which he had contracted. It was simple, non-indurated in character, and was healed in a few days, by the application of a diluted solution of chloride of soda. The patient then requested me to examine his testicles, both of which were found to be enlarged. The patient had a general scrofulous appearance, red hair, blue eyes, &c., but without any sign of this disease existing in an acute form.

The right testicle, he stated, had been enlarged for five years. It had never been any larger than a hen's egg, which was its volume when I first saw it, nor had it been the seat of any pain. The natural form of this organ was pretty well preserved, with very slight unevenness, and attended with but little pain on pressure. Previous to the time of his noticing this enlargement, he had never exposed himself to the contraction of syphilis.

The tumor on the left side was considerably larger than the one

on the right. Fluctuation was very manifest, and the upper part of the tumor was translucent, showing that hydrocele existed on that side. On further examination, the left testicle was also found to be enlarged, and the epididymis participating in the swelling. The patient had never suffered any pain from either tumor. The disease upon the left side had existed only about five months, and since then he has worn a suspensory bandage, which added greatly to his comfort. The left gland was, very probably, enlarged sometime before he noticed it, inasmuch as it is probable that the hydrocele was consecutive to the organic disease of the testicle. His attention was, doubtless, only drawn to the swelling, when the hydrocele commenced.

It is usually very difficult, indeed, to determine the nature of indolent enlargements of the testicles. To form a probable diagnosis in this case, it was necessary to adopt the process of exclusion. And first, they were not of syphilitic origin; for the patient distinctly states that, prior to his noticing the tumor on the right side, he had never been exposed. It was not probable that they were cancerous, as they were not nodulated—were unaccompanied with pain, and exceedingly indolent in their growth. They were not tubercular enlargements, as there were no pulmonary symptoms of tuberculosis, nor any circumstances in the history of the case to lead to the belief that phthisis was hereditary in the family. The presumption, then, was, that they were chronic, scrofulous enlargements, and this opinion was supported by his general appearance.

Although the hydrocele was considered a mere consequence of the organic affection of the testicles, it was deemed advisable to get rid of this complication, in order that applications might be made directly to the diseased organ: accordingly, the trocar was introduced, and about five ounces of colored liquid drawn off. In consequence of the gland being diseased, the solution of iodine injected into the sac was made weak: Iodine, ℥ iss.; water, ℥ iv. The pain attending the operation was not thought sufficient to justify chloroform. The next day the tumor had regained its original size, from the new effusion of serum. The tinct. iodine was applied twice a-day to the scrotum, to promote the absorption of the newly effused fluid, wnich was complete on the fourth day. The testicle on the side operated upon was found to be larger than before the operation, which was probably owing to the irritating injection.

On the fifth day after the operation, a bandage was drawn tightly around the left testicle, without inducing any pain. In a day or two after the application of the bandage, both glands seemed slightly diminished, the left by the direct pressure of the bandage, and the right by its indirect compression. The bandage being tightly drawn around the left testicle, drew the scrotum with considerable force around the right, and by this means pressure was exercised upon both glands at the same time. The patient was up, and attending to his occupation, on the seventh day, though each testicle was alternately bandaged for about three weeks. He was directed also to wear a suspensory bandage, and to take syrup sarsaparilla, with hydriodate potash. The recovery was complete.

CASE V. *Axillary Tumor.*—This case was one of tumor, situated in the left axilla. The patient, a young lady about 23 years of age, of strictly scrofulous constitution, light sandy hair, light blue eyes, and phlegmatic fair complexion. Three months previous to my seeing her, she had measles, which left her with a constant diarrhœa and amenorrhœa, from both of which she was relieved before the operation was proposed. About twelve months previous to the excision of the tumor in the axilla she had an operation performed upon her left arm, which, from her description, and the appearance of the wound, must have been the removal of a portion of carious radius, just above the wrist. Chloroform, she stated, was administered during this operation.

The tumor, dated from her attack of measles, was situated immediately in the left axilla, and was about the size of a hen's egg. It gave her intense pain down the side and arm, extending to the ends of the fingers. The arm, however, frequently felt benumbed, which was probably due to the pressure of the tumor on the axillary nerves. In consideration of the history of the case, the peculiar diathesis of the patient, and the location of the tumor, it was thought to be an enlarged lymphatic gland.

The great pain it occasioned, and its constant increase in size, in spite of external and internal remedial agents, rendered it advisable to remove it.

Chloroform was administered, but with great caution, as she was of feeble constitution, somewhat hysterical, and frequently complained of violent headaches. After a few inhalations, nervous twitchings came on, when the chloroform was removed, and again

applied to the nose after the twitchings had ceased. This was repeated several times, until she became accustomed to the agent, and more composed, when it was given to insensibility, but not to stertorous breathing. The incision was made parallel with the long diameter of the axilla, and directly over the tumor. The integuments were removed from around the tumor with the bistoury, and with the grooved director and fingers it was dissected out. No difficulty was encountered, save at the two points, above and below, where it was united to the chain of lymphatics, situated in this region. These connections were severed, little by little, with the grooved director and bistoury.

The wound healed very well, except at a small point, which, at times, discharged pus for several months. The pain of the side and arm was relieved entirely, but there have been enlargements of other glands in the same region, which were, however, reduced by blisters and the internal administration of syrup of iodide of iron. The microscope confirmed the diagnosis.

CASE VI. *Fracture of the neck of the Os Femoris.*—Was called to see a woman æt. 43, who had fallen from a window about five or six feet high. She was thin and emaciated, and presented the appearance of a woman above fifty. After her fall she was unable to rise from the ground without assistance. When seen, she complained of pain in the internal and upper part of the thigh, and over the region of the bladder; there was no swelling, but great pain experienced on moving the limb, particularly on abducting it; the foot was a little inverted, and the leg about half an inch shorter than the other. On rotating the limb a crepitation was felt and heard near the trochanter major, though there was no deformity at this point. That there was a fracture admitted of no doubt, but its exact locality was very uncertain.

On the following day the limb was a little shorter than the day previous; complained of pain still in the upper and internal part of the thigh. There was great pain upon rotation; crepitation perceptible. The foot, which was on the day of the fracture slightly inverted, was now found to be everted.

The fracture was, then, diagnosticated to be within the capsule, for the following reasons: 1st. The very slight shortening of the limb: this is always less than when the fracture is without the capsular ligament. 2d. The eversion of the foot. This, it will be remembered, occurred on the day succeeding the fall, which is not

usually the case, but does occasionally happen: indeed, the foot may remain inverted. (See A. Cooper, &c.) 3d. The small amount of deformity which followed the accident. If the fracture had been exterior to the capsule, there would have been a greater prominence of the trochanter major, particularly in so thin a person. 4th. The locality of the pain, which was situated in the upper and internal part of the thigh. 5th. The pain being greater in abducting the thigh than in any other motion given to it. 6th. The patient being very thin, with indistinct crepitation and no swelling.

Thus, having satisfied myself as to the nature and locality of the fracture, the patient was placed upon the back, in bed, and the leg put upon a double inclined plane. She was informed that probably she would be confined in that position for six weeks, or two months, and that she must not be surprised if she continued more or less lame during the remainder of her life. These precautions should always be taken, for surgeons are very often censured for mal-treatment, when really they are not at all to blame for the lameness. Let your patient be notified of this possible result, and if it does occur you will not be censured.

The patient did very well during confinement to bed, and was allowed to get up at the end of six weeks and walk on crutches. She used these about a month, then a stick, and in about four months could walk without either. The leg is almost imperceptibly shortened.

CASE VII. *Ulcer of the Knee: amputation.*—An old inebriate, with exhausted constitution, had a large and profusely suppurating ulcer on and around the knee-joint, arising from a burn. The suppuration from this extensive ulcer, and the patient's excessive intemperance, had prostrated the strength and energies of the system to such a degree that fatal exhaustion was imminent, without a riddance of the disease. Amputation was proposed only as a dernier resort. It was the only chance for life. Amputation was performed above the knee; the stump yielded a most profuse and offensive matter. The patient could retain nothing upon his stomach but whiskey and water. He soon became delirious, and during his frenzy at night, pulled off the dressing and one of the ligatures, probably of a small artery, as the hemorrhage was not great. Died the day succeeding the removal of the dressing; the fourth or fifth after amputation. Anesthetic used successfully.

CASE VIII. *Disease of the Great Toe: amputation.* A negro man from Elbert county, some six months previous to my seeing him, cut himself with an axe, leaving a large wound directly across the proximal joint of the great toe, which could not be healed. Caries of the bones of the joint and the body of the phalanx, was detected by probing, and amputation decided upon. The French mode of operating was adopted as being the most neat and expeditious. The incision was commenced upon the upper surface of the metatarso-phalyngeal articulation, carried between the great and next toe, through the joint, and the flap made on the inside, without removing the knife. The head of the metatarsal bone was found diseased, and was removed with Liston's bone forceps. The flap was swollen and a little diseased, in consequence of the inflammation from the old wound, and did not entirely unite for three or four weeks, when the boy was sent home. Chloric ether was given.

CASE IX. *Injury of Finger: amputation*—A negro boy from Jefferson county, was sent up to have his finger amputated. The finger had been badly crushed with the sash of a saw-mill. An attempt had been made by the attending physician to save it, but necrosis and inflammation of two of its joints supervened, and necessitated an operation. The first phalanx was badly crushed, two fistulæ had formed and discharged unhealthy pus.

The operation was performed at the metacarpo-phalyngeal articulation. The knife was passed from between the middle and index fingers through the joint, and the flap made upon the inside. The finger did well, and the boy was sent home a week after the operation, though the wound had not entirely healed. The flap was so œdematous and inflamed that it could not heal by the first intention. No anesthetic was given.

CASE X. *Tumor of the Lower Jaw: extirpated.*—A negro woman, æt. about 40, was sent from Barnwell, S. C., for the purpose of having a tumor removed from her jaw. The tumor was hard, slightly lobulated, extending from the angle of the lower jaw, and along the bone to a level with the right commissure of the lips. It was quite movable, and loosely attached to the surrounding parts, seemingly situated in the submucous cellular tissue, and about the size of a guinea egg.

The patient noticed it about eighteen months previous to my

seeing her, as a small, hard, round tumor, but causing no pain. She stated that within a few months past it had grown more rapidly and been the seat of pain.

In order that the patient might not be disfigured with a scar upon the face, and run no risk of a salivary fistula, it was deemed advisable to remove the tumor from the inside of the mouth: it was probably also less painful than making the incision through the skin.

The tumor was cleanly dissected out, and as there was a little hemorrhage, a sponge tent was placed in the mouth, with compress and bandage upon the outside. This was done only as a matter of precaution, as the owner desired to take the negro home in the afternoon. Directions were given to remove the tent the next day, and to wash the mouth three times a day with a weak solution of chloride soda. No anesthetic was given.

The microscope exhibited a mass, without any element of organization whatever. The enveloping membrane was of strong cellular structure.

CASE XI. *Disease of the Tibia: amputation.*—Was called to Burke county, to amputate the leg of a negro 21 years of age. The skin of the anterior surface of the leg was diseased, from the ankle to very near the knee-joint, with numerous and large ulcers upon it. There was also a very large ulcer upon the upper and internal surface, extending above the level of the tuberosity of the tibia. The tibia was enlarged from just above the ankle to within two inches of the tuberosity, and rough and uneven to the touch. The disease of the leg had existed for a number of years, during which it had been several times healed, but always broke out again in a few months. The ulcers extended too near the knee to amputate below this joint.

With the kind and efficient assistance of Drs. Harlow and Hughes, of Burke county, the leg was amputated above, but as near the knee-joint as practicable.

Concentrated chloric ether was administered, requiring about five ounces to produce insensibility. No ill effects resulted. Dr. Harlow, who took charge of the case, informed me that the boy did well, and the stump healed rapidly.

CASE XII. *Fibro-plastic Tumor: extirpation.*—A mulatto girl, æt. about 22 years, had a tumor a little larger than a pigeon's egg

upon the upper and internal part of the breast, near its base. She noticed it about a year ago, but it has given her very little pain. It was situated just beneath the skin; was round, hard and very movable, being attached only to the adjacent cellular tissue. Fearing that the tumor might be malignant, she was advised to have it removed before the gland and surrounding tissues became implicated.

The freezing mixture was applied, and the tumor removed with scarcely any pain. There was more pain experienced by the application of the sponge to arrest hemorrhage, after the tissues had regained their natural condition, than during the operation. The wound healed by first intention.

The microscope exhibited no cancer cells. The tumor was what Jobert calls fibro-plastic, and which he classes with non-malignant growths, though very liable to return.

CASE XIII. *Diseased Nipple: excision.*—This case occurred in the person of the young lady upon whom the operation in the axilla (above related) was performed. The nipple was very red, particularly at its base; not ulcerated, but presented red, indolent granulations, very much resembling the lymphatic vegetations sometimes found upon the glans penis. The affection was thought to be scrofulous, and the patient was treated constitutionally for months, and had every variety of local application made to the nipple. Nothing gave permanent relief; and as the irritation from these granulations or vegetations caused the neighboring lymphatic glands to enlarge, inducing incessant pain, and limiting the use of the arm, it was deemed advisable to remove the nipple.

The objection to such an operation is that, in case of child-birth, mammary abscesses are almost inevitable. They might be prevented, however, by judicious pressure upon the gland before and after labor. In this case, the objection was not valid, inasmuch as the state of the nipple was such as to have probably obliterated the mouths of the milk ducts, and therefore the operation would not render her more liable to abscesses than without it.

The freezing mixture was successfully applied, and but little pain experienced during the operation. The wound is now healing very well by granulation.

ARTICLE XIX.

LETTERS FROM SAML. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY.

LETTER NO. 2.

MONTGOMERY, ALA., May 4th, 1855.

Messrs. Editors,—In my last letter I spoke of a *line* of healthy action which separates the two conditions of excitement and depression. This line is supposed to be that condition of the nervous system in which there is an equal distribution of *nervous power*, and a corresponding distribution of the *circulating fluids*, proportioned to the natural wants of the respective organs, and stands higher or lower according to the age, sex, constitution and temperament of each individual, securing health, alike to the feeble and delicate, and to the strong and robust. This equilibrium of nervous power and vascular action, which is the result of the operation and agency of the thousand things, both external and internal, which enter into the means of man's support, is constantly liable to disturbance, by the influence and the operation of the thousand causes which tend to his destruction. Among the former may be enumerated all those agents, known as *healthy excitants*, as air, light, food and drink, raiment, exercise, the influence of *moderate* degrees of heat and cold, &c., &c., and among the latter is to be found the influence of *excessive* degrees of heat and cold, and the influences of bad air, bad food and drink, bad raiment, bad habits, bad passions, and bad every thing, to say nothing of the agency of ærial, and vegetable and animal poisons, meteorological and epidemic influences, &c.

In order that I may not be misunderstood in regard to the objects which I have in view in the discussion of this subject, it is necessary and proper to state, that it constitutes no part of my purpose to engage in the investigation of the nature and causes of diseases with respect to their *local* character, believing, as I do, that as local affections, merely, they are nearly the same under *all* circumstances, differing only in degrees of intensity, and presenting phenomena *peculiar* to the organs in which they are located, and that they exert little or no influence in determining the character of the general constitutional symptoms, when the general system happens to be brought under their influence, these being assignable to the influence of causes which have operated antecedent to, and independent of the local affection, and which have operated

to create and establish the pathological conditions and their modifications spoken of. And here, I may be permitted to reiterate the necessity which we of the South have for separating the too intimately *associated* idea of *local* excitement, *local* irritation, and *local* inflammation, with excessive *general* nervous excitement and excessive *general* vascular action. The peculiar character of our diseases requires the separation—their appropriate treatment demands it.

Among all the causes, which operate to give origin and support to the conditions of excitement and depression, the most prominent is the influence of climate, with respect to heat and cold. The general influence of cold, tends to give strength and vigor to those nerves which support *organic* life, while the influence of atmospheric heat tends to diminish it, and induce in them a state of debility and depression, while the reverse of this proposition holds good with respect to the nerves which support *animal* life. This influence of cold, imparts to the inhabitants of northern climates an amount of *vigour* of constitution which enables them not only to resist the ordinary influences which produce depression, to which indeed they are less exposed, but to sustain a much higher and more protracted state of excitement. This vigour is supposed to depend upon a greater degree of *density* in the moving fibres, combined with a larger amount of the *inherent nervous power* which gives rise to vital motions, and sustains them, to some extent, independent of the *animal powers*, and when an occasional cause operates to depress the nervous powers below the line of a healthy excitement, the depression will generally be of short duration, and the reaction will be prompt and energetic. Hence, most of the diseases of Northern latitudes are characterized by the evidences of high nervous excitement and vascular action. It is different in regard to the influence of *atmospheric heat;* for, instead of the *general vigour* and *inherent nervous power* possessed by the inhabitants of cold climates, those of warm climates possess less of *density* and a greater degree of elasticity of the moving fibres, which allows a free exercise and play of the *animal powers*, and gives greater excitability or mobility to the general system, but *diminishes* the power of resisting the influence of depressing causes, or of sustaining, for any great length of time, a state of high excitement; thus laying the *foundation* or *predisposition* to diseases of depression and *congestion*. It is not improbable, too, that the constitution of the blood plays an important and active part, not only in lay-

ing the foundation for these states of excitement and depression, but in sustaining them after they have been established. The difference in the constitution of the blood, consisting in a greater degree of density, or a larger amount of its solid constituent principles in the inhabitants of cold climates, while in those of warm climates the blood is more *rare*, having a larger amount of the *liquid*, and fewer of its solid constituent principles, and while the former favors the production and continuance of excitement, irritation and inflammation, the latter favours the establishment and continuance of depression and congestion.

If such be true, with respect to the influence of climate upon the nervous system, and the constitution of the blood, in laying the foundation or establishing a predisposition to these opposite conditions, it is sufficient of itself, in my opinion, to account for the prevalence of diseases of depression and congestion in Southern latitudes, independent of the influence of the many other causes which combine to produce the same effect. It is upon the truth of this proposition, that I have based my assumption, that "congestion" constitutes an *essential pathological condition*, and, as such, deserves the serious consideration of every Southern practitioner. It may be urged, that if such be the result from the influence of climate, why are not *all* the diseases of warm climates, *congestive* in their character, all being subject to the same predisposing influences? The answer is, that such is the *tendency* of *all;* but, that although the effect of the influence of atmospheric heat is to *diminish* the vigour and inherent nervous power, it does not *destroy* it, and a sufficient amount is left to enable the inhabitants to resist the influence of the general predisposition, by what is known as *acclimation,* and also the influence of occasional depressing causes; and while a few have sufficient vigour to sustain a high degree of excitement and vascular action, and manifest a general inflammatory diathesis, and many to sustain excitement, almost to the point of inflammation, a great many sink under the overwhelming influence of depression and congestion.

If heat and cold, are capable of manifesting such a decided influence upon the general system as to determine the character of diseases, with respect to excitement and depression, their influence is not less manifest upon particular organs, systems and tissues, as exhibited in the prevalence of diseases of the lungs and other portions of the respiratory apparatus in cold climates; while disorders of the liver and bilious complications, generally constitutes

the most prominent feature in all the diseases of warm climates—a circumstance which renders the consideration of this subject of the greatest importance to us, who are not only liable to the diseases peculiar to the influences of atmospheric heat, but also to those of cold, which, unlike those of the same nature as they prevail in cold climates, scarcely ever fail in being involved in biliary complications, and these complications are often so prominent as to overshadow in importance the primary affection, as every practitioner of any experience must have often observed in pneumonia and other kindred affections. The extent and prevalence of these complications, renders it necessary and important to examine a little more minutely, into the nature of their causes and the manner of their production. That these complications result from an *enfeebled* condition of the liver, from the influence of long continued and high ranges of atmospheric heat, will scarcely be denied; for it is an axiom, that long continued or excessive action in any organ will be followed, sooner or later, by a corresponding degree of inactivity, torpor or debility, and the liver, responding to the impression of spring and early summer heat, pours out its secretion in great abundance, (itself a fruitful source of debility,) gives rise to those disorders which are indebted mainly for their character to excessive biliary secretions. But, as the season advances, the excitability of the organ diminishes by degrees, until it ceases to be impressed or excited to action by the ordinary degrees of heat, which rising still higher, or continuing for a length of time, it falls into a state of permanent inactivity and debility. It is to this source that we are enabled to trace the prominent characteristic differences between vernal and autumnal fevers; the former being generally intermittent, with more evident signs of excitement and vascular action, with redundant biliary secretions; and the latter, remittent, with evident signs of depression and congestion, and a deficient secretion of bile. But these effects of atmospheric heat upon the functions of the liver, do not terminate with the autumnal diseases; for time and rest being required to restore its lost tone and accustomed activity, the same condition is transferred, and ingrafted upon the winter diseases, impressing them with the same character, with those which have preceded. It is in this way that we account for the *similarity*, if not the *positive identity*, of character of our pneumonic and other symptomatic fevers, with our autumnal idiopatic fevers. I would not be understood as ascribing the existence of these fevers to

this *enfeebled* condition of the liver, but I maintain that the fever having been *excited* by those causes which produce local inflammation will be determined in its character by the *identical* causes which determine the character of autumnal fevers, and that the liver will play about the same part in the one, as the other, which is never an unimportant one, on account both of its relations to other organs, and the functions which it has to perform. Now, to understand clearly the nature of these relations, both with respect to these complications and the part which the liver has to sustain in the general pathological condition of congestion, it is necessary to keep in mind, that it possesses a peculiar circulation, known as the "portal circulation," consisting of radicles which arise from most of the abdominal viscera, which, uniting to form a common trunk, enters the liver, and is again distributed into minute capillary branches, and that its office is, to receive the venous blood from the abdominal viscera generally, and redistribute it in the liver, where, and from which, is secreted the biliary fluid, thus presenting both the character of artery and vein. The same may be said of the pulmonary artery, which conveys venous blood to the lungs; and while the former vessel is required to receive the blood of all the principal organs engaged in the repairs and support of the system; the latter is required to circulate the blood of the entire system, but what constitutes the great difference between these vessels and others, is, that their *capillaries* circulate *venous blood*, while the remote or arterial capillaries circulate *arterial blood;* but a greater, or at least a much more important difference, upon which the whole of our theory is built, consists in this, that while depression or debility in the nerves which sustain or control the circulation in them, tends to retard the flow of blood through the former, while it favors a more rapid flow through the latter, and that excitement, while it accelerates the flow of blood through the capillaries of the pulmonary artery and vena portarum, it retards its flow through the remote, arterial capillaries; the one, giving rise to (the latter) what Dr. Wood has termed "active" and the other "passive" congestion. Now, let us apply the principle, to the formation of a condition of general congestion. Suppose the whole system to be in a state of depression, which means *diminished excitement*, a relaxation to some extent (proportioned to the degree of depression) takes place in the arterial capillaries, which allows the blood to escape more freely, and which otherwise would be retained longer in them, for the performance of the

respective offices for which it is distributed, especially the blood sent to the organs of digestion, while the venous capillaries, especially of the vena portarum, which is destined to receive that blood, sharing in the loss of excitement, which is necessary to sustain the motion of the blood through them, it becomes retarded, and the consequence is, that the whole portal system soon becomes congested, and the depression extending to the organs of respiration, and to the capillaries of the pulmonary artery, as before explained, retarding the flow of blood through them, an undue accumulation of blood takes place throughout the venous cavities, constituting a general venous congestion. It is scarcely necessary to say, that general excitement produces exactly the reverse condition of things,—that excitement in the remote capillaries retards, while it accelerates the flow of blood through the hepatic and pulmonary capillaries, producing a state of general arterial plethora.

Having so far noticed only one cause, in connection with the pathological condition in question, namely, atmospheric heat, and endeavored to trace out that connection, it remains only to say, that the other causes of depression, (which are almost innumerable,) whether permanent or occasional, whether predisposing or exciting, serve to give additional force and activity to the one already mentioned. Some of them will receive, however, more particular attention, when I come to speak of the condition, in connection with some particular diseases, and their modifications, which I shall perhaps do in my next letter, after tracing out the morbid effects and pathological phenomena growing out of the general condition of depression and congestion.

Still hoping that you may not become weary of the subject,

I remain, your's truly,

SAM'L D. HOLT.

ARTICLE XX.

A brief history of the introduction of the Asclepias Verticellata, for the cure of Venomous Snake and Spider bites. By JAMES C. HARRIS, M. D., of Wetumpka, Ala.

This plant, more familiarly known in this vicinity as the Indian snake weed, or *Fitzpatrickana,* may generally be found growing in a light-grey or red-soil, upon the uplands throughout the States of Alabama, Mississippi, Arkansas and Missouri, and in some portions of Georgia, Florida and Louisiana. It flowers throughout

the months of July and Augnst, and may be readily found in the above localities, where the forest growth is scrubby oak and hickory, or in the pine barrens, among the white oak runners. It has a succession of *white flowers*, extending from an inch to an inch and a half along its top, and from the eighth to a quarter of an inch in length, *each one resembling almost exactly the tooth of a snake.* It is *perennial* and when full grown is from fifteen to twenty-two inches high, measuring in the largest portion of its stem, from the sixteenth to the eighth of an inch in diameter, and terminating in a fibrous root, the fibres extending horizontally in every direction to the distance of five or six inches from the foot stalk. The stem is jointed, and from the root to the commencement of the first leaves is from eight to ten inches. The *leaves* are acerose (or needle-shaped) of a green color, and from an inch to an inch and a half long, four appearing at each joint. It is about the first plant that appears in the spring, and the last that disappears in the fall.

The use of the above plant was first introduced in the cure of snake bites in Pike county, Alabama, in the year 1824, by Caldwell Eastis, a white man, who had resided with the Choctaws, Cherokees and Creek Indians for the last forty years preceding. The account he gave of the manner in which its virtues were brought to his notice is as follows:—In the year 1804 or 5, when accompanying a party of the lower Creek Indians upon a trading expedition to Nashville, Tenn., one of the pack horses, whilst grazing near the ten Islands upon the Coosa river, was bitten upon the leg by a rattlesnake. The limb immediately commenced swelling, and the animal exhibiting strong marks of excruciating pain, whereupon one of the party retired to the woods, and in a short time returned with a hand full of the *above* plant, which being bruised between two smooth stones, was mixed with a bottle of water and given as a "*drench;*" two hours afterwards, they resumed their journey, the animal limping slightly for the first two or three miles, afterwards giving no manifestations whatever of uneasiness or disease. He also stated that there was a tradition amongst these tribes, that a knowledge of its virtues being communicated to the white man, would most effectually destroy its remedial powers, *as he expressed it,* "*break the charm;*" he afterwards frequently witnessed its administration for all kinds of *snake bites* to the Indians themselves, and to their domestic animals, and always with instantaneous relief.

For the foregoing account of the discovery and introduction of the remedy in this section of the State, together with a greater portion of the following, we are indebted to our friend, the Hon. Benj. Fitzpatrick, who some time in the year 1826, received the foregoing statement in person from Caldwell Eastis, then in his eightieth year, and since dead.

The usual manner of preparation and administration is as follows: Take and slightly bruise five or six of the entire recently gathered plant, (root, stem and leaves) put them into a pint of spring water or sweet milk, and boil down to three gills. This is the ordinary dose for an adult, and is to be diminished proportionably for children, and given three times a day. The first dose generally gives immediate relief, and the others are merely given by way of precaution. After each dose is swallowed, the remaining bruised and boiled plant is to be applied to the bitten part.

The immediate effects upon the system of the above dose, appear to be that of a powerful *anodyne sudorific*, arresting the nausea and vomiting, and giving instantaneous relief to the pain, to be speedily succeeded by free perspiration and gentle slumber. Shortly after swallowing a dose, an agreeable sensation of warmth is felt throughout the entire frame, commencing in the region of the heart, and extending to the surface and extremities. The stomach, no matter how irritable, scarcely ever rejects the remedy, and if it does, never more than once or twice.

Since its first introduction in this neighborhood, in the year 1826, it has been used in more than forty cases of snake bite, and in every instance, as far as we have been able to ascertain, with the most happy results. Although it does not appear to possess the power of immediately reducing the *œdema* of the bitten extremity or part, it seems to completely destroy the disposition to any annual or periodic swelling or discoloration of the same. It has also been tried in several cases of *spider bite*, and in every instance has been attended with as complete success as in the cases of snake bite.

From its tremendous power in arresting and neutralizing the *virus* of the viper, the rattle-snake and spider, not only in the human species, but also in that of the inferior animals, we cannot entertain the shadow of a doubt but that it will be found upon trial a complete *antidote* to any of the animal poisons, even that of the dreaded "*hydrophobia.*"

In a report on the indigenous botany of Prattville, made to the

Alabama State Medical Association in 1852, by Dr. S. P. Smith, we are informed that the asclepias verticellata, a very popular remedy in domestic practice for snake bites, had been tried in one or two cases by himself, but not under such circumstances as enabled him to test its claims satisfactorily.

If we are mistaken in ascribing to the asclepias verticellata in the cure of snake bite, the extraordinary powers that we have—as it is indigenous throughout the entire Southern and South-western States—we hope the profession will, through their published communications upon the subject, shortly set us right.

Contributions to Practical Surgery. By JOHN P. METTAUER, M.D., L.L. D., of Virginia.

Vesico Vaginal Fistula.—It is now more than twenty-five years since I first operated for the cure of this afflictive infirmity, during which period many extremely interesting cases have been treated by me, and most of them successfully. Recently, several examples of the disease have come under my care, and, as they resulted fortunately, I have thought it might not be unacceptable to the profession at large to give them publicity, as well as to describe the modes of operating I now adopt. Indeed, I think every successful case should be published; as it is the increasing number of cures that will induce surgeons to regard it no longer as an opprobrium of our noble art, but as a curable disease, in a large majority of instances; and such is the opinion that my individual experience leads me to express in this paper.

Some years since I contributed, through the American Journal, a short paper on vesico vaginal fistula, with an account of some cases I had treated successfully, and I expressed the opinion in that communication, that every example of the disease could be cured. Since that paper was published, some extremely bad forms of the infirmity have come under my treatment, which, from their utter incurability, have induced me to modify the opinion then entertained; yet, I believe a very large proportion of the cases are curable. When the entire basfond of the bladder is destroyed; or the urethra and cervix quite into the vesical triangle, such cases are indeed utterly incurable; and several of these horrid examples have been presented to me since the paper referred to was published.

In one of these cases it seemed that the entire bladder had sloughed away, leaving only the orifices of the ureters, into which I could readily introduce a common probe, and carry it up several inches into the ureter itself. There was not the least appearance of the vesical cavity; and the ureters terminated on each side of

the contracted vagina in a spongy growth, rather larger than the extremity of a medium sized finger, and about an inch in length. There was no ulceration of the parts, but considerable irritation constantly existed, induced, no doubt, by the action of the urine upon them. This woman menstruated regularly, and seemed to be healthy in all respects, save the irritation and excoriation of the vagina and vulva, which, occasionally, became very distressing and troublesome.

The other case differed from the one just described, in presenting a mere border of the bas-fond of the bladder, upon which the ureters opened by fungous growths of considerable size—the greater part of the floor of the bladder posteriorly and anteriorly nearly to the meatus urinarius having sloughed away; yet the vesical cavity above remained partially as a kind of fossa. This subject, too, enjoyed pretty good general health, menstruated regularly, but suffered much from occasional vagino-vulval irritation and excoriation.

Such formidable diseases as these, are to be regarded as necessarily irremidable. Fortunately, however, they are not of frequent occurrence, as I have only met with two such examples out of thirty-two cases, that have come under my management, in all.

The following case, which I shall relate in full in order to explain my method of operating, occurred with a white married woman, aged about thirty-five years, and followed her first and only parturition, which was protracted, as I was informed, and badly managed. The fœtus was large, and the head remained nearly two days in the inferior strait, during which time the bladder was so closely compressed as to render urination impracticable, and the introduction of the catheter exceedingly difficult. It was not known, as I learned from the lady herself, for several days after delivery—four or five she thinks—that there was any thing wrong about the bladder, or in the passage of the urine, except that there was a constant dribbling of it, and totally without the control of the will.

There was considerable inflammation of the parts at this time, and for many days after, which prevented the necessary examination into the case for nearly three weeks after delivery. Finally, it was ascertained by the attending physician, that an opening existed in the vesico-vaginal wall, near the urethral portion of the vesical triangle, through which every drop of urine escaped from the bladder into the vagina. The general health of the lady had materially suffered from constant irritation of the vagino-vulval surface; and I believe, if the fœtus had not been still born, that she, in all probability, would have succumbed under her sufferings. From having been a remarkably healthy, robust woman, she now was emaciated and greatly debilitated; and such is the usual effect of this painful affection on the constitutional health.

Some five or six months after this lady's accouchement, I was called on for the purpose of deciding as to her real condition, and

my examination confirmed the report of her family physician. I found an elliptical opening beyond the sphincter muscle more than an inch in length in its longest diameter, which was transversely situated, while its shortest, or antero-posterior, did not exceed half an inch. Already a tuberculated fungous mass of considerable size presented through the fistulous opening—a common appearance in the disease—which caused intense pain of a dragging, bearing down description, when the bladder contracted, as it often will do, when, from any cause, urine accumulates within its cavity even in small quantity. The borders of the opening were smooth, rounded, and completely cicatrized, presenting a labiated appearance, and were entirely free from all inflammatory tenderness, as was evinced by pretty rude pressure with the probe or finger, causing very little if any pain.

The case being in all respects favourable for an operation, it was determined to execute it at once, and the following was the mode adopted. I had the lady placed on her back, very much in the position as for lithotomy, on a high bed, with folded blankets and sheets under her to protect the bed, the parts being exposed to the strong light of a window immediately opposite to, and on a level with the perineum. Care was taken that the nates rested fairly on the edge of the bedstead, so as to render the parts about to be operated on easy of access. A two-bladed speculum was employed for the purpose of dilating the os externum and vagina, which, after being screwed open to the requisite extent, was held in its proper position by grasping the handle. This instrument displayed the fistulous opening fully, and caused little or no pain: it was firmly held *in situ* by the lady, with perfect convenience.

The free borders of the fistula were next denuded of their mucous membrane, by the use of delicate hooks to take hold of it, and scissors curved on their flat surfaces, or delicate knives curved in like manner, or of the ordinary form, to excise it beneath the hook. In this manner I removed a narrow but continuous belt of mucous membrane from the entire border. In denuding in this operation, the belt should, if possible, be excised in an undivided manner, for reasons too obvious to be mentioned. I next removed the mucous lining for half an inch beyond the denuded border, commencing at that border, and taking it off, likewise, in an undivided continuous belt, using the cutting instruments already named. During this stage of the operation, for the purpose of arresting the traumatic bleeding; always exceedingly troublesome without being profuse, by obscuring the parts, and thus retarding and protracting the operation; cold water was freely applied by injecting it over the denudations with a syringe.

For the purpose of approximating the denuded borders of the aperture and confining them in contact, metallic threads of pure lead of moderate size were employed, and they were inserted by the aid of needles considerably curved.

The metallic thread was employed of the length of five or six

inches, doubled at each extremity upon itself and flattened a little so as to form a hook. This hook was then hung in the loop of a silken or thread ligature previously inserted into the eye of the needle.

Thus arranged, the needle, held in the grasp of Physic's artery forceps, with its point deeply inserted into the fistulous opening, and directed upwards, was made to transfix the upper border from the vesical cavity to the vaginal surface fully an inch from the denuded margin, and half an inch on the right side of the urethra. The needle, with its appendages, the thread and leaden wire, was now carefully drawn through with a pair of strong forceps, until the metallic thread was fully one third of its length out beyond the border.

I next armed the other extremity of the leaden thread, by connecting its hook with the loop of the ligature still remaining in the eye of the needle, to be inserted below. The needle, for the purpose, was held and directed by straight forceps, grooved at the extremities of the blades, so as to receive and confine it securely, and somewhat longer than Physic's: while its point was deeply inserted into the inferior border through the fistula, from the cavity of the bladder, and brought out fully an inch from that border on the vaginal surface. As soon as the point of the needle was perceptible, it was taken hold of with the traction forceps, already referred to, and carefully drawn through with the metallic thread attached to it. This insertion was made directly opposite the one above, to prevent puckering of the borders when the threads were tightened.

In like manner, a suture was applied to the right portion of the fistulous opening, and the blood was now carefully removed by forcibly injecting cold water over the parts, or by picking away adhering coagula with the forceps, where they could not be removed by the water.

I next proceeded to approximate the denuded borders, by making traction on the metallic threads, and then carefully confining them in close and exact contact by twisting their free ends together, until the loops were sufficiently abridged, to enable them both to support, and moderately to compress the structures embraced by them; and for the purpose of twisting the wires, I employed a light pair of self-closing forceps, without ring-handles, having found that instrument far more handy than the ordinary dressing forceps, or forceps with ring-handles. After securing the first suture so as to bring the denuded borders well together, I tightened the second, and was gratified in finding that the fistulous opening was perfectly closed, and that not a drop of urine escaped between the borders. I was careful in twisting the wires not to employ undue force, but sufficient to bring the opposing surfaces into complete and firm contact, without injuriously compressing the unlooped structures; and I invariably twisted from left to right, to prevent confusion.

After many trials in determining the extent to which the tension should be carried, I finally adopted as a safe rule, the fixed and erected state of the twisted extremities of the wires, and their bristle-like spring when touched with the probe; and the tightening of the loops should be executed with extreme caution and gradually, testing it as we proceed, from time to time, by touching the wires with a probe or the extremity of the forceps.

After having tightened the wires sufficiently, I found that fully one half of the surfaces denuded beyond the margin had been brought completely in contact, thus affording a more extensive surface for adhesion. The twisted extremities were now cut off transversely, so as to project a few lines beyond the verge of the vulva. Again the seat of the operation was carefully washed with cold water applied with the syringe, and every part critically examined. A short tube of silver, of the form of a female catheter, and very light, not more than five inches in length, with a small ring at its open extremity, was now introduced into the bladder, to prevent the slightest accumulation of urine in that organ. In arranging the position of the tube, I was careful to guard, as far as possible, against the instrument's resting chiefly on the floor of the urethra, to prevent the incontinence liable to follow in some cases when it remains long in the bladder.

The lady was now removed, and placed on a bed previously arranged, as in cases of parturition, on her left side, because it was at the time most convenient. I directed that the position on the side should be rigidly maintained, as it would prevent, in a very great measure, the draining of urine over the seat of the operation, which, if not guarded against, might greatly disturb the adhesive process, and thus defeat the operation. A commanding narcotic was now given, and every thing arranged to promote slumber as far as practicable. A diet of tea drained from bread, or rice gruel, was directed, taken in small quantity and after long intervals. The application of cold water to the whole vagina with the syringe was directed to be kept up day and night, care being taken not to wound or disturb the seat of the operation with the instrument. The opiate soon quieted the nervous system, and procured very considerable ease.

Fearing that the bowels might act, as will sometimes be the case for several hours after the operation, the narcotic was directed to be repeated in six or seven hours after the dose already given, and to be continued at like intervals, as long as any marked pain was felt in the bladder, or the seat of the operation. It was only necessary to give a second dose of the narcotic, as every thing went on most favourably. The cold water was faithfully used to the vagina, and afforded great comfort.

On the third day I tightened the sutures moderately, and having left the free ends long enough to project above the verge of the vulva, little difficulty was experienced in reaching them with the forceps for the purpose. The application of cold water to the

vagina having soothed the parts so pleasantly, were directed to be continued.

As yet there had been no action from the bowels, nor was there any disposition manifested to such action. The urine had flowed freely through the tube, without the slightest draining over the seat of the operation. Finding some incrustations about the threads, and mouth of the tube, I removed the instrument on the fourth day, and replaced it with a new clean one.

On the eighth day the sutures were removed by snipping with scissors, one thread just below the twisted portion of each noose, and drawing it away with the forceps, and I found that perfect union had taken place between the borders, leaving not a vestige of the fistulous opening. Some slight bleeding from the orifices left by the threads followed, but was only momentary.

The seat of the operation presented very slight tumefaction, and the undue redness was only a shade above what was natural to the mucous lining of the vagina. I continued the tube in the bladder two weeks from the time of removing the sutures; and directed the lady to keep her bed the same length of time, to allow the adhesions to become perfectly consolidated, before imposing any considerable amount of stress on the vesico-vaginal floor, from the accumulation of urine in the bladder during an erect posture of the body. The bowels never acted until the twelfth day after the operation, and when they did act, the evacuation was natural and easy. I then permitted a more sustaining and generous diet; and from day to day thereafter, the quantity was augmented gradually, until full meals were taken.

Three weeks after the removal of the sutures, this lady left my neighborhood perfectly restored to health, except very slight incontinence of urine (by no means unusual after the operation, but which generally ameliorates) and some general debility.

The mode of operating which I have just described may be regarded as the one I now invariably adopt in similar cases. It is true I have, in certain examples, pursued other methods, but they have in most cases been unsuccessful. In several instances I have made trial of the quilled suture as improved by Dr. Sims, now of New York, but it has not succeeded in my hands. The cases in which it was employed were, as I supposed, favorable for its successful application, but I did not succed in them. In each case, three in number, the operation failed from ulceration of the denuded borders, both at the margins and where the metalic clamp rested on them, and by the premature cutting out of the silver wires. In one case, the clamp induced sufficient ulceration to form a new opening into the bladder so early as the 5th day after the operation. Possibly I may have used undue force in the approximation of the denuded borders in these cases; but it seemed to me that I only carried it to the extent of placing them in complete and firm contact.

This suture, however useful it may have been in the hands of

Dr. Sims, is liable to important objections. If applied with too much force, it will almost certainly cause ulceration or actual sloughing of the denuded borders; and it will be very difficult, in most cases in which it is used, to determine the degree of force which should be used in applying it. Even when moderate compressing force is employed, the circulation of the parts must be essentially impeded the whole length of the clamps, which cannot fail to endanger the success of the operation by producing ulceration or sloughing of the border.

There is another weighty objection to this suture, and I think it equally as important as the one just named. It is the almost utter impossibility of increasing or diminishing the approximating force after the suturization is completed, and the wire threads cut off, should it be necessary to do so; and, according to my experience with the leaden suture, used as I have described in the case already detailed, it will always be necessary to increase that force on the second or third day after the operation; which can be most readily done by simply twisting the wire a few turns, or, until it is firmly and steadily exerted, as already described.

The liability of the silver wire to cut out prematurely constitutes, likewise, a solid objection to the clamp suture, especially if the borders are thin, and the mucous membrane delicate.

The interrupted suture, formed of leaden wire, is not liable to these objections in any material degree. If it causes ulceration or sloughing of the denuded borders, only the parts immediately embraced by the metallic loops will suffer, while the structures between will remain comparatively uncompressed, and their circulation allowed to go on nearly normally, thus favouring adhesion of the denuded surfaces held together by them. This suture, too, can be applied with measured degress of force, as already explained, so as to adapt that force with precision and safety. And it enables the surgeon to increase its approximating agency at any time after the operation, should it be found necessary, without subjecting the parts to disturbance, or the woman to pain.

The strongest objection to this suture is its liability to "cut out," before firm adhesion takes place between the denuded borders. But if the thread is deeply inserted, never less than an inch, and more deeply, if the structures are soft and delicate, and always beyond the denuded borders, this accident will seldom if ever defeat the operation. The more effectually to secure the permanent agency of this suture in keeping the margins in close and steady contact, it should be made to include considerable thickness of the structures anterior to the bladder, as well as width of border; and this can be effected by directing the point of the needle more profoundly into the textures as it is introduced. The thread, as already intimated, should invariably be carried through the border considerably beyond the denudation. If this precept is not strictly obeyed, the suture will certainly "cut out" prematurely.

It is the depth of this suture that secures its reparative efficacy in the cure of vesico-vaginal fistula. That is the point on which success turns; and if the denudations are effectually executed, a failure will seldom follow. This suture can be safely passed through the vesical wall, and I decidedly prefer it in all cases, because it secures more effective suturization; and it is entirely free from all liability to induce inflammation of the bladder, as my experience fully testifies.

The possibility of small fistulous openings following suturizing through the walls of the bladder, is the only danger of importance that is to be feared; and if the threads are not permitted to remain longer than 8 or 9 days, this accident can hardly take place. I have often suffered them to remain 10 and 12 days without such an occurrence. In a few hours the ligature openings close. I have rarely known them discharge urine after a day.

The long continued irritation of the vesical walls, induced and kept up by the fistula, seems to render the whole bladder less susceptible of acute inflammation. It is very certain that rude violence done to the bladder is seldom or never followed by acute cystitis when vesico-vaginal fistula exists. I have never yet witnessed a case of it, and opportunities have often been afforded me of seeing the bladder violently irritated during operations for vesical fistula. By transfixing the bladder in the employment of this suture, besides uniting great security and firmness in its approximating agency, it also enables the operator effectually to oppose a much broader belt of the denuded margins of the fistula, by reason of the unbridled condition of the borders, and their tendency to introvert, in some degree, when brought together by tightening the wires. And this is an important consideration, when the margins are thin, as will often be the case, in favouring adhesion.

The clamp suture necessarily precludes any such widening of the margins to be united, by reason of the threads of silver wire basted through them, which compel the margins to approximate and come into contact only at their borders, when those threads are tightened, after the clamps are adjusted. It is evident, from a moment's reflection, that only very limited portions of the denuded margins, except the border or edge, can be brought into contact by the application of this suture. If the silver threads were made to penetrate the vesical cavity, or even to re-enter the vaginal passage a few lines before reaching the border, the difficulty just considered might be obviated, and the utility of the suture greatly enhanced. Indeed either of these modifications would be, in my humble opinion, an improvement of the clamp suture, especially the first one named.

I have been thus particular in considering the comparative merits of these two methods of suturizing, in the treatment of vesico-vaginal fistula, because my individual experience with them enables me, in a degree, to judge of their relative value; and be-

cause, too, I wished the objections to both, as far as I was able to appreciate them, fairly placed before the profession.

It has been asserted by some of the journalists of the north, in support of the safety and infallibility of the clamp suture, that laceration of the recto-vaginal wall was incurable until that method of re-uniting the parts was adopted. This is certainly an incorrect statement, because so early as 1832, I treated a case of this laceration with complete success by the use of the leaden wire interrupted suture, which case was reported in the 25th number of the American Journal; and, subsequently, I have reported other cases of that disgusting affection, treated successfully with the same kind of suture; in all having treated and cured *twenty-seven* cases with the leaden interrupted suture alone, and without the least difficulty.

In every case of vesico-vaginal fistula, the sutures should be made to act in the direction of the short diameter of the opening, as will be the case where it is elliptical. If, however, it is circular, as I have seen in twenty instances, the sutures should be introduced transversely. The transverse direction is most favourable, both for the approximation of the borders, and adhesion, because the structures yield and expand readily in that direction; yet if the disparity of diameter is inconsiderable, it will be best to suturize transversely. The needles should invariably be as small and delicately formed as possible, and entirely free from cutting edges and asperities.

The considerations, which have been presented, relate almost exclusively to the uncomplicated and simple examples of vesico-vaginal fistula, and the case detailed may be assumed as a fair type of the disease, and my mode of treating it. In the varieties distinguished by complications, a treatment will be demanded, adapted to such complications; but, generally, the mode of suturizing, I have advocated in this paper, will, with these, be also indispensable.

When the opening is very large and the borders cannot be brought fully together without the employment of great force, it would not be safe to rely exclusively on the suture, as it would almost certainly "cut out" before adhesion could possibly take place. Nevertheless the suture is the chief agent in approximating, and maintaining the firm contact of the denuded borders.

To prevent premature loosening and "cutting out" of the sutures, it will be proper in these examples to form sloping incisions of the lips, beyond the points transfixed by the sutures, deeply into the textures, and longer than the diameter of the fistula, on both sides, after the marginal denudations have boen formed. These incisions will generally allow the borders to be easily approximated, without interfering with the adhesive process in the slightest degree, and they cause very inconsiderable pain; they must not extend to the vesical cavity. Should the margins prove unyielding, after forming the incisions, it will be proper to deepen and extend them in an undermining manner in the direction of the fistula, taking

care not to cut into the bladder. If properly executed, this expedient will seldom fail to render the lips of the fistulous opening easy of approximation; and the incisions soon unite, in their new relations, so as to aid the sutures, in keeping the borders from separating, or themselves from "cutting out" prematurely.

This mode of operating is applicable to all examples of the infirmity, attended with large openings, in which the borders cannot be drawn together without employing considerable force, as well as in some cases defying their approximation without such incisions; and if properly executed will seldom fail of success, and the incisions soon heal up.

When the borders are thin and readily approximated, instead of denuding them, a new surface of considerable width may be formed around the edge of the opening, by carefully splitting it with a delicate and keen knife two or three lines in depth. The borders being now carefully drawn together, and the incisions opened with hooks, or by passing a probe around them as they come in contact, quite an extensive surface for adhesion is secured, and the union which results will be proportionally firm. This mode of operating will be more applicable to cases attended with thick borders, because the splitting of thin edges is by no means easy of execution, while those of some thickness can be incised with great convenience.

To perform this section, the lip must be held by long, delicate, self-closing tenaculum forceps, and slightly everted, so as to bring the edge of it fairly into view. The incisions can now be formed in succession, until the whole border is split, taking care that they shall be directed along the middle of the border.

This operation, for denuding the border, is much more easily performed than that by the removal of the mucous membrane; and when properly executed the new surfaces readily approximate and unite. It is, too, the best mode of rendering the edges raw for the employment of the clamp, or any form of the quilled suture, especially if the silver threads are brought out upon the borders through the middle of the incisions, so as to secure the perfect contact and fixation of the new surfaces. Upon this plan the thinnest borders can be made to unite in the firmest manner. Should the first operation with it, however, fail, the borders will become considerably thickened by the marginal incisions, and the parts placed in a better condition for repeating the operation some weeks afterwards, or, as soon as all inflammatory tenderness of them subsides.

After numerous operations for vesico-vaginal fistula, performed by myself, and varied in almost every possible manner since 1830, I have at last adopted the methods, that have been described in this paper, as the best for a very large majority of the cases of this infirmity, if not for all that are to be regarded as curable; and I believe it can be so improved, especially in the formation of instruments, as to render it far less difficult of execution than is now the case. I am confident that I operate now with less difficulty than I did three years since; and there cannot be a doubt but this is due

chiefly to progressive improvements in my instrumeuts, as well as to my increasing familiarity, both with the applicability of the instruments, and the infirmity itself.

There are certain complications of this affection that, at first sight, present difficulties well calculated to embarrass inexperienced operators; and in some instances give no little trouble to those most conversant with the disease.

The first to be named is a *fungus growth* from the mucous membrane of the bladder; just within the verge of the fistulous opening. This formation presents a red granular surface, closely resembling healthy granulations in appearance; is tuberculated in form; varying much in size; is pedunculated; often partially filling the fistulous opening, but chiefly presenting or depending into the vagina, and when touched with the probe yields blood freely. When of moderate size, it almost invariably recedes into the bladder on placing the body recumbent. Even when quite large, it often, nay, generally, re-enters the vesical cavity upon lying down.

This formation causes those distressing bearing down pains, and strainings, so common in vesico-vaginal fistula; and they, occasionally, continue to be repeated many days after the fistula is closed, now and then causing the reopening of the fistula, by cutting, or tearing out the sutures after partial adhesion had taken place in some instances. In some cases they involve the orifices of the ureters, seeming to be an elongation, and hypertrophied enlargement of these orifices, as the urine can be seen discharging from their surface by drops or jets.

As long as these bodies remain within the vesical cavity they cause little if any pain; but as soon as they protrude from it, the bearing down and straining commence, and continue until they re-enter the bladder, or the person is placed recumbent.

In denuding and suturizing the borders, these protrusions are liable to be wounded, and should be carefully avoided, as they bleed quite freely, which accident would seriously embarrass and prolong the operation, but without endangering the bladder from inflammation in the slightest degree. My custom is to force them back into the bladder with the index finger before the denudations are commenced, and to confine them within the bladder, by temporarily closing the fistula with a kind of probang, of proper size, resting on the inner surface of that opening.

After the sutures are applied, and the fistula closed, there will not be any reason to entertain fears from these tuberculous bodies, unless they cause strainings, as will sometimes be the case. If straining follows, narcotics in liberal doses will be demanded. In eight or ten days after the operation, and frequently as soon as it is completed, the straining and bearing down uneasiness cease, and it is exceedingly probable that the spongy bodies are soon dispersed by the action of the absorbents.

Another complication occasionally to be met with, is the *inclusion of the cervix and os uteri by the opening of the bladder; and firm ad-*

hesion between them, thereby causing the uterine discharges to pass into the vesical cavity, where, mingling with the urine, they, finally, are discharged through the fistula.

In these examples the openings in the bladder are large, or the uterus could not be included by them, to the extent generally met with; and although they are firmly united to the uterus, so as to conceal that organ completely from view, or the touch, they rarely, if ever, close without leaving an opening to constitute the fistula.

I have only met with a solitary instance of this complication in the thirty-two cases that have come under my care, and I am induced to believe it is not of frequent occurrence. Dr. Sims, also, mentions a case treated by him, but in what ratio with his cases is not stated, or I have not seen the statement if it has been published.

I treated my case as a common example of vesico-vaginal fistula, without making an effort to disengage the uterus from the bladder; and I had the satisfaction to find that the woman experienced little inconvenience from the new relations of these organs in urinating, or during the menstrual flow. Dr. Sims, I find, treated his case in like manner. But for the escape of the menstrual discharge from the urethra, with her urine, my patient would never have supposed there was any change in her condition as respects urination and menstruation; and it was a long time before she discovered that she menstruated through the meatus urinarius.

It is questionable if an attempt to release the uterus from the embrace of the bladder would ever be justifiable in these complications of vesico-vaginal fistula. And, it is probable, this complication supplies the only means of cure, as the openings of the bladder, in these cases, are too large to be closed in any other manner.

Calculous formations within the bladder, and around the borders of the fistula, occasionally complicate this affection.

When a deposition of calculous matter takes place in the vesical cavity, it causes the usual suffering from stone of the bladder; and if a fungus body exists at the same time, its growth will be rapidly augmented, by reason of the increased bearing down and straining, caused by the calculus within the bladder. Incrustations, from the deposition of calculous matter around the borders of the fistula, are, however, the most frequent form of this complication; and in some instances these incrustations become exceedingly thick and bulky if the case has not been carefully attended to from day to day; and they invariably cause much suffering from the local irritation and excoriation induced by them.

If a calculus exist in the bladder, sounding will readily detect it, and it should be promptly romoved by extraction through the fistula.

The incrustations can be most readily and painlessly gotten rid of by picking them away with the forceps, the vagina being previously dilated with suitable instruments, and exposed to a proper light. After every particle of the incrustation is removed, the parts should be freely washed by injecting over them cold water, as already described. I have only met with a single case complicated

with stone of the bladder, which was also attended with axtensive incrustrations around the fistulous opening; but nearly every one was complicated more or less, with incrustations around the opening —and sometimes upon the fungus growth also.

Recto-Vaginal Fistula has, now and then, been observed in connection with the infirmity, and of this complication, too, I have met with a solitary instance.

In this case the opening into the rectum existed about an inch and a half from the verge, was elliptical in form, the long diameter corresponding with the long diameter of the rectum, and readily admitted the extremity of the index finger. The discharge of fæces through the opening into the vagina, in this case, greatly aggravated the irritation caused by the urine; and the irritation of the fistula kept up almost constant disorder of the bowels.

This is indeed a most afflictive complication, and one, too, well calculated to embarrass the surgeon in determining as to its treatment. In the only case that I have ever witnessed, I operated for both affections at the same time, and was so fortunate as to succeed by one operation.

The borders of the recto-vaginal fistula were first denuded and suturized. I next operated for the vesico-vaginal fistula as already described, and in nine days the leaden threads were cut away, and both fistulæ found to be perfectly closed by firm adhesions; and this patient continues well, now six years since the operations were performed—having given birth to two children during that period.

I think in all similar cases that both fistulæ should be operated for at the same sitting, as very little more time will be acquired, or pain experienced. If, however, it should be necessary from any cause to depart from this rule, and to operate for them at different times, the vesico-vaginal fistula must invariably be the first to be cured, as the incessant draining of urine over the rectal fistula, even if closed in the best possible manner, could hardly fail in defeating the operation.

Contraction of the vagina is by no means an unusual complication, because the same agency inducing the fistula, likewise can produce sloughing and contraction of that passage. In some instances the contraction nearly or quite closes the vagina.

These contractions, in all of the cases in which I have met with them (three in number), serve to embarrasss the operation by rendering the fistulæ more or less inaccessible. They should, invariably, be corrected before attempting the operation for the fistula; and for the purpose it will generally be sufficient, either to dilate the vagina with graduated tents of sponge covered with oil silk, commencing with the smallest: or, by cautiously dividing the bands causing the contractions, and then dilating with the tents. I have employed both of these methods with entire success.

It is important not to attempt the operation for closing the fistula until the tents of the vagina can be dispensed with, as their presence in that passage, after such an operation, would seriously

endanger its success, more especially as long as the sutures remain, and for the first two weeks afterwards.

In some cases, along with the fistulous opening of the vesico-vaginal wall, there will be *laceration*, or *destruction of the urethra*, partially, or its entire length.

I have met with two examples of this unfortunate complication, and how they were caused I never was able to ascertain fully, but I ascribed them to the long continued pressure of the fœtal head upon the parts, during its slow progress through the inferior strait.

In one of these cases the urethra was laid open its whole length, and it was difficult to discover a trace of the original canal. But for the slight projections that remained in the seat of the meatus, I should never have supposed a urethra had existed. The other case had suffered only partial destruction, as the meatus, and about half of the urethra, remained entire.

These complications are always difficult to remedy, besides being sources of irritation, and, comparatively, barriers to sexual intercourse, which they render painful as long as they exist. These cases are amenable to treatment, and, judging from my experience with them, as far as two cases will enable me to decide, I think they may always be remedied.

After denuding the imaginary borders, in the case of entire destruction, I employed the clamp suture of Dr. Sims, which enabled me to restore, or, perhaps I should say, to form the urethra, and to maintain the parts well together. I only employed force enough to bring and keep the borders well in contact.

After three days I had the mortification to find that the clamps had become loosened by reason of the wire threads having cut out, and the borders had separated. I removed the whole apparatus, and after two months repeated the operation with the interrupted leaden suture. This was applied deeply, at intervals of four or five lines. In two days the sutures were tightened, at which time not the slightest separation of the borders had taken place. A very light silver tube was kept in the passage from the time of operating until a week after the sutures were cut away.

On the eighth day I removed the threads, as already described, and found perfect union had taken place, except a very small portion near the meatus. After six months, I closed this with two stiches. The subject of this case has entire command of the retaining and expelling powers of the bladder. The case of partial destruction was relieved by a single operation with the interrupted leaden suture, restoring also the retaining and expelling powers of the bladder.

Incontinence of urine sometimes follows the operation for vesico-vaginal fistula, either as the result of injury done to the sphincter muscle in the formation of the fistulous opening; or, from continuing the tube in the bladder too long; or, using one too heavy, and suffering it to rest entirely on the lower or under segment of the

urethra. This is a most troublesome and disagreeable infirmity. It sometimes continues only for a few days or weeks.

When time does not correct this evil, art must be called in. In some instances injecting the bladder with a solution of nitrate of silver, of the strength of 4 grains to the ounce of water, and in the quantity of 4 ounces, to be retained 2, 3, or 4 minutes, will afford relief, and repeating it once in 2 or 3 days. Now and then, a strong solution of alum, or a pretty concentrated infusion of green tea, used in like quantities, and after like intervals, will restore the retaining power of the bladder.

If these remedies fail, it will be best, either to pass a suture deeply around the cervix, and so tighten the noose to compress it decidedly, and to continue it for four or five days; or, to remove longitudinally an elliptical piece of the cervix, and then to close the opening with sutures as already described, keeping a light tube in the urethra as directed for fistula of the bladder. This last expedient will not fail to remove the incontinence; it is not attended with much pain in its execution, and will seldom be followed by acute inflammation of the bladder. I know from a trial of it, that it will relieve the incontinence, and, that the operation can be safely performed.

I have invariably adopted the position on the back, in my operations for vesico-vaginal fistula, believing it the most easy for the woman, and quite convenient for the surgeon. And for dilating the vagina, the two-bladed speculum, with the blades fully an inch and a half wide, and curved spatulæ of the same width I have generally employed, and found them to answer my purposes very well. I have used other contrivances also, but the speculum and spatulæ I have found much the most convenient in all respects. I generally employ a high narrow table, so formed that the lower limbs are supported above the operator's head, so as to be entirely out of the way, yet the woman suffers no pain or inconvenience from having them so disposed. The trunk I invariably secure against motion, by fixing it to the table, with a cross-bar passing through the uprights for the support and fixation of the legs, across the hypogastrium with the nates projecting somewhat beyond the border of the table. In every case I have the parts exposed to the light of a window on a level with them. If the window, however, is high, it should be curtained about three feet above the woman's body.

In some of my cases I have operated repeatedly without success, but the failures were due to undue softness of the parts, from bad general health, connected with a strumous diathesis, and before I adopted my present mode of deep suturization. It is not proper to operate for the infirmity while females are labouring under constitutional scrofula.—[*Virginia Medical and Surgical Journal.*

On the Treatment of Vaginitis and Leucorrhœa. By MM. Becquerel and Rodier.

In this paper the authors detail the results of a comparative trial of various local applications they have made at the *Lourcine.* The

following are their conclusions:—1. The application of *concentrated solution of nitrate of silver* is very painful, not unfrequently inducing exacerbations that compel the suspension of the treatment. The same objection applies, though in a much minor degree, to the *solid nitrate.* 2. *Tincture of Iodine* possesses few advantages; for, although it causes little pain or exacerbation, its power is feeble. It is, however, a good means for dissipating either recent or old leucorrhœa, when unaccompanied by an inflammatory condition of the mucous membrane. 3. A solution of *tannin* in equal parts of distilled water, and applied directly to the inflamed mucous membrane, is the best means of treatment, exciting neither notable pain or exacerbation, curing, apparently without fail, and as promptly, as the solid nitrate of silver. So efficacious and unirritating, indeed, did the authors find this concentrated solution of tannin, that they now employ it in all cases, acute or chronic.

During the discussion which ensued upon reading the paper, M. Becquerel laid down the following marks of distinction between the *varieties of vaginal flux.*—1. The discharge consists of a pure, transparent, viscous mucus, composed of mucine, diluted in water, containing very small quantities of saline matters. It is furnished by the uterus when quite healthy, and sometimes when slightly irritated, but not to the extent to produce inflammation. 2. *Leucorrhœal mucus* is milky and opaline, containing some bubbles of air. It contains mucine, salts, and fat, especially cholesterine. Under the microscope, we find abundance of epithelial cells, and some fatty globules. It is never a product of inflammation, and is often co-existent with an anæmic condition of the mucous membrane. 3. *Muco-pus* is thick, viscous, and of a light or greenish-yellow color. It contains mucine and fatty matters in great abundance, but no soluble albumen. By treating the fluid with a little water, shaking and filtering it, we obtain a liquid that is not coagulable. Under the microscope, we find fatty globules, with a few epithelial cells and pus globules. It is the product of inflammation of the mucous membrane, but without ulceration. 4. *Purulent mucus* consists of a mixture of muco-pus and pus. It infers the existence of ulceration, and it often presents us with a means of diagnosis when there is ulceration of the mucous membrane of the interior of the cervix uteri, inaccessible to the eye. It contains little mucine, abundance of fat, especially cholesterine, and soluble albumen. The presence of this last is shown by agitating a little of the fluid with distilled water, the filtered liquid being coagulable by heat. Thus the fluid that is the product of simple inflammation contains pus *without* albumen, whilst the result of inflammation with ulceration contains pus *with* albumen. With the microscope, we observe in purulent mucus numerous pus globules, a few epithelial cells and fat globules, and protei granulations.—[*L' Union Médicale. London Med. Times and Gaz.*

Treatment of Scarlatina.

To the Editor of the Medical Times and Gazette:

Sir—Having found the dilute nitric acid to be a most efficient medicine in the treatment of scarlatina, especially in the malignant form of it, I am induced to send you a few remarks on the subject, hoping that you will insert them in your columns if you think they deserve a place there. I know that nitric acid has been made use of before in this disease, but I do not know that it has ever been given in the large doses I have found so serviceable, or that it has been applied generally in the same manner. I am very far from wishing to have it thought that I look upon nitric acid as a specific for scarlatina, (indeed, until we find all people so alike in outward physical conformation that we cannot tell one from another, I think no one can expect to meet with such similarity of constitution as will admit of the possibility of curing the same disease in different persons, by one universal and unmodified remedy,) but only that, by the treatment with nitric acid, I have attained an amount of success that has not occurred to me when using other means. I have taken tolerably full notes of between fifty and sixty cases. A friend in the neighborhood of Pimlico has kindly done the same. The acid was used in every instance. It would be unreasonable to ask you to give insertion to all these; but I subjoin a report, in a condensed form, of twelve consecutive cases of my own, and a similar number from the note-book of my friend. The report is not so full and explanatory as to the management of each case from the commencement to the termination of the treatment as I could wish it to be, but it will, I think, serve to show the age, sex, character of the eruption, type of the disease, and that which is of most importance—the result. It is proper I should mention, that for the relief of particular symptoms, and under particular circumstances, I have not refrained from using other medicines; but in no case has the nitric acid been laid aside during the continuance of the fever. The character of the disease in this neighborhood has been, for the most part, of the most unfavorable description, yet I can conscientiously assert, that out of fifty-seven cases treated with the acid, only three have terminated fatally during the fever; four others died from one or other of the usual sequelæ; but of these last, three, I have no hesitation in saying, were lost by premature exposure to cold, and an entire disregard to both instructions and warnings. To a child seven or eight years old, I am in the habit of prescribing a mixture containing three drachms of dilute nitric acid, and eight ounces of camphor mixture—two tablespoonsful to be taken every four hours. Also a gargle, half an ounce of the acid, with eight ounces of water, to be used frequently. If the heat of the body be much above the natural standard, I direct the entire surface to be sponged with tepid water and the acid—an ounce of the latter to two quarts of the former. When the eruption is very vivid, and fully developed, so as to render it probable that the desquammation will be considerable, the acid produces more "smarting" than can

be well tolerated, and it should therefore be omitted. The only inconvenience I have found to ensue from the internal administration of the medicine has been, that in six or seven cases it appeared to produce a difficulty in voiding the urine; but well fomenting the region of the bladder with warm water, an opiate, and diminishing the frequency of the doses of the acid, invariably afforded the desired relief. With children too young to make use of the gargle, I apply it with either a syringe or sponge. The distressing nature of the throat symptoms, in the worst forms of the disease, render gargling a most necessary proceeding; but many children, even of six or seven years old, cannot be got to accomplish it; they have never been asked to do anything of the kind before, and, when attacked with this disease, they are too ill, fretful, and peevish, to learn, and thus lose the benefit of an essential part of the treatment. I invariably request all my patients, who are the parents of young children, to teach their little ones to gargle frequently with water when cleaning their teeth; and there are many that now feel thankful they paid attention to the advice.

Name.	Age.	Variety. (a)	Character of Eruption.	Termination.
1. Jane A.	10	S. ang.	Moderate.	Recovered.
2. Wm. H.	5	S. malig.	Very faint.	Recovered.
3. Susan B.(b)	3	S. ang.	Profuse.	Recovered.
4. George B.	6	S. ang.	Moderate.	Recovered.
5. Mary B.	1½	S. simp.	Moderate.	Recovered.
6. Samuel B. (c)	9	S. malig.	Scarcely any.	Recovered.
7. Ellen B.	4	S. malig.	Very faint.	Recovered.
8. John R. (d)	3	S. malig.	Faint.	Death.
9. Timothy M.	12	S. malig.	Faint.	Recovered.
10. Edward B.	8	S. simp.	Moderate.	Recovered.
11. Samuel M. (e)	6	S. malig.	Very faint.	Death.
12. James R. (f)	9	S. simp.	Moderate.	Death.
13. Mary L.	30	S. ang.	Moderate.	Recovered.
14. Henry L.	1½	S. malig.	Faint.	Recovered.
15. Ann J.	4	S. ang.	Moderate.	Recovered.
16. Wm. J.	11	S. malig.	Faint.	Recovered.
17. Alfred J.	9	S. malig.	Very faint on fifth day.	Recovered.
18. Emily J. (g)	3	S. malig.	Very faint.	Death.
19. Mary Ann W.	9	S. ang.	Profuse.	Recovered.
20. John W.	12	S. ang.	Moderate.	Recovered.
21. Charles W.	7	S. ang.	Moderate.	Recovered.
22. Ellen W.	4	S. simp.	Moderate.	Recovered.
23. Mary E. (h)	13	S. malig.	Very faint.	Recovered.
24. John E.	11	S. simp.	Moderate.	Recovered.

(a) The division into scar. simplex., scar. anginosa, and scar. maligna are used.

(b.) The throat symptoms very severe; sponging with acid omitted on account of pain.

(c) Throat symptoms and coryza most distressing; breath intolerable, offensive; recovery very tardy, with symptoms of uræmic poisoning.

(d) This child had been ill four days before I was sent for. He was most unmanageable, and it was only with the greatest difficulty any medicine could be given him.

(e) This child died a month after the fever; gradually wasted away, there being no sign of organic disease of any kind.

(f) No. 12 was the brother of No. 8. He was so far convalescent on the eighth day that the parents requested me not to see him again, unless sent for. I gave them instructions and cautions, to which they paid no attention. A fortnight afterwards I was sent for in haste, and found him dying from uræmic poisoning.

(g) My friend met another medical man on the fifth day, who was anxious to give free chlorine, as he said he had saved three of his children. It was tried, but the child died on the seventh day.

(h) Tardy recovery. Extensive collections of matter in the cervical glands.

I fear you will consider my communication inconveniently long; but at the same time, I trust you will deem the success of the treatment a sufficient excuse for my troubling you with it.

I am, &c., HENRY DAY, M.R.C.S., and L.A.C.

Stafford, Feb. 20, 1855.

On a successful method of treating Acute Rhematism by large and frequent doses of the Bicarbonate of Potash. By A. B. GARROD, M.D., Physician to University College Hospital.

At a late meeting of the Royal Medical and Chirurgical Society, Dr. Garrod, after a few preliminary remarks, observed, that he was induced, in May, 1852, to try a new method of treating acute rheumatism; and, finding great success at first, resolved steadily to pursue the plan, and has done so up to the present time. The object of his communication has been to record the method adopted by him, and also the results obtained in fifty-one cases of rheumatic fever which have been admitted, under his care, in University College Hospital, during the last two years and three-quarters. The main part of his plan of treatment consists in the administration, in a diluted form, of two-scruple doses of bicarbonate of potash, every two hours, day and night, until the patient has been free from all articular affection and febrile disturbance for two or three days, using local depletion over the heart's region, if any cardiac disease is present or threatened. The author then detailed three cases of rheumatic fever, illustrating this mode of treatment; the first, a girl, 10 years old, in which the duration under treatment was five days, the total duration eight; the second, a young man, aged 20, with a complication of heart disease, where the duration under treatment was eight, the total duration fifteen days; the third, a young woman, aged 18 years, in the fifth attack, the former ones having always lasted for a month or five weeks, but which, by the adoption of this

plan yielded in nine days: total duration being but thirteen days, four having elapsed before her admission into the Hospital. He afterwards gave a table of fifty-one cases of acute rheumatism; and of each patient the following particulars are noted:—The age, occupation, hereditary predisposition; the number and causes of attack; the symptoms before admission; the symptoms during treatment; the nature of treatment; and the duration of the disease. From these cases the following deductions are made, viz: that in twenty males the duration of the disease under treatment averaged between six and seven days, and the total duration between eleven and twelve days; and, in thirty-one females, the disease under treatment averaged from seven to eight days, and the total duration between fifteen and sixteen days—giving, in all, an average under treatment of seven days and a half; and, for the total duration about thirteen days and a half. The author then alluded to the influence of the bicarbonate of potash, when administered in large and frequent doses, upon the different organs and functions of the body; and remarked, that it produces neither nausea, vomiting, nor purging; in fact, no symptoms of gastro-intestinal irritation. It now induces a strongly alkaline condition of the urine, causes it to effervesce freely, with excess of acid, but does not appear to promote an increase in the quantity of the secretion. It appears to render the secretion of the skin less acid, sometimes almost neutral. That it acts as a powerful controller of the heart's action, reducing greatly the frequency of the pulse, but without causing the faintness often produced by digitalis, colchicum, etc. That it probably increases the alkalinity of the serum of the blood, and diminishes the coagulability of the altered fibrin occurring in rheumatic fever; and hence, probably, checking or preventing the deposits of lymph on the endo or peri-cardium. He (Dr. Garrod) stated his opinion, that the influence of the bicarbonate was felt not only in shortening the duration of the articular affection, but also in preventing or moderating the cardiac disease. After enumerating many details of the method adopted, and the value of certain adjuncts, as opium, calomel, and occasional general depletion, he proceeded to recommend a plan of treatment which, from his experience, he considered calculated to insure the greatest amount of success, and thought it probable that the total duration of the disease might, on the average, be reduced to about ten days, provided that the treatment was adopted early, and no serious complication existed.

The President asked Dr. Garrod if he had employed bicarbonate of soda, and, if so, with what result. He (the President) had long ago recommended alkaline treatment for rheumatism; and, in a paper read before the Society eighteen months ago, he mentioned several cases that were successfully treated by carb. of magnesia and precip. sulphur, about half a drachm of each night and morning; with alkalies and bark given every three hours during the day. He had lately attended a lady who was treated in the same way, and on the fourth day she was in her drawing-room.

Dr. Dickson thought it a matter of regret that Dr. Garrod's cases were those of hospital patients, many of whom were probably dismissed before they were really cured, and were lost sight of afterwards. He could not help thinking that such large doses of alkaline medicine must ultimately produce a very injurious effect on the system. He believed that vigorously attacking the disease with mercurial medicines and other agents which produce a decided effect on the liver, would do more to abridge the period of the disease and relieve the sufferings of the patient than any other system. He had seen cases in which small doses of alcoholic extract of aconite had been employed with the best effect.

The President concurred in Dr. Dickson's approval of the occasional use of alcoholic extract of aconite. He wished to ask if Dr. Garrod had not found anæmia produced in some of his cases, necessitating the use of preparations of bark or steel.

Dr. Garrod, in answer to the President's first question, said he had not used bicarbonate of soda, his object having been to test the effects of a simple treatment extending over a long period. He had no doubt that other remedies than the one he had suggested might often be useful as adjuncts, such as opiates and extract of aconite, though he had frequently seen the latter fail. Bicarbonate of soda would probably be as useful as bicarbonate of potash. He had seen patients two or three years after they were fully under discipline, and they never suffered in the least from the treatment. He believed that alkaline treatment had no tendency to produce anæmia, but that rheumatism itself had such a tendency. Mercury, he thought, was far more likely to produce injurious effects on the system than alkalies.

Dr. Webster was disposed to doubt the efficacy of new remedies for rheumatism, which was the subject of greater diversity of opinion than almost any other complaint. Bicarbonate of potash might possibly be useful in young subjects of an inflammatory character, but he should hesitate to employ it in other cases, and especially for old people. Formerly acids were employed in cases of rheumatism, and he could hardly believe that both acids and alkalies, could be efficacious. Opium was considered an excellent remedy, and he had seen it used with the best effect.

Dr. O'Connor said, the acid referred to by Dr. Webster was lemon-juice; and it was now the experience of many Medical men, that, when given in large doses, it was productive of considerable prostration. He (Dr. Connor) had lately used bicarbonate of potash in several cases of acute rheumatism with the best effects, together, in some instances, with cod-liver oil in combination with quinia.

Mr. Streeter recommended the use of nitrate of potash, with the addition of bark, on the subsidence of the more inflammatory symptoms. Animal food should be taken sparingly, and bleeding was sometimes necessary, in order to prevent the pleura or the heart from becoming implicated.

Dr. Ratcliffe mentioned some experiments made several years

ago in the Military Hospital at Brussels, showing that the natural course of rheumatism extended over a period of ten or twelve days.

Dr. Rogers had used lemon-juice without observing the slightest depression. In cases of phthisis, combined with rheumatism, he had given it with great benefit.

The President said he had employed bark in conjunction with alkalies for thirty-two years; he had occasionally used bicarbonate of soda. Where there was a threatened exudation of lymph, great benefit was derived from biborate of soda. Turpentine might sometimes be usefully employed externally as well as internally.

Dr. Basham said, that the discrepancies of various authors might be reconciled, if they would pay more attention to the particular forms of the disease, Cod-liver oil was exclusively useful in cases of rheumatism allied to syphilis or other causes of disease. The form to which Dr. Garrod had alluded was acute rheumatism, in which the fibrous element of the blood was in excess, and the saline materials were deficient; any plan of treatment, therefore, in which the saline principle entered, must be the most efficacious. Great relief might be obtained by exposing the joints to what might be called saline baths, enveloping them with spongio-piline saturated with nitre.

The Society then adjourned.—[*London Med. Times and Gazette.*

On the Employment of Wine as an Enema. By M. Aran.

M. Aran observes, that in many cases of dyspepsia, chlorosis, phthisis, and convalescence from severe diseases, the use of wine is strongly indicated whilst the heat and irritation of the digestive organs it induces absolutely prevent its employment. Having found vinous enemata of great utility in obstinate diarrhœa, he tried them in various other cases, and for the last three or four years he has administered them whenever slow convalescence has been united with irritability of the digestive organs. He has also obtained great and unexpected advantages in phthisis, having at first administered the wine on account of the accompanying diarrhœa. When the disease is advanced, little, or only temporary, benefit results: but, when given at an earlier period, and associated with cod-liver oil or other means, the wine does exert a salutary influence that merits attention. In gastralgia, while the general debility seems to indicate the use of tonics, yet wine cannot be given, even in small quantities, without exciting a sensation of burning; but in several examples of this the vinous lavements have not only restored strength, but have so diminished the gastric irritability, as to allow of a little wine being taken with the food. Another form of dyspepsia alike susceptible of benefit, is vomiting, with the rejection of alimentary matters—the strength and *embonpoint* rapidly returning under the use of the enemata.

But the affection, in which M. Aran has been most supprised at the amount of success obtained was chlorosis. Influenced by the

so prevalent opinion, that iron is the specific remedy, he at first gave it in conjunction; but he afterwards omitted it, only prescribing, besides the wine, general frictions with an ammoniacal liniment, and a powder consisting of bismuth, rhubarb, and valerian. In a few days the patients seemed to have recovered their normal health just as if iron had been given, and that even in severe cases. In their relation to iron, cases of chlorosis may, indeed, be divided into three categories. In the first and most numerous, iron properly administered furnishes a durable cure. In others, a rapid amelioration ensues, which is followed by a relapse on its discontinuance. Temporary amendment attends its resumption, and so on for years, iron thus becoming a constant necessity. Thirdly, there are not a few cases in which iron fails altogether, or in which the amelioration never rises to the dignity of a cure. M. Aran has also advantageously employed the injections in various other conditions characterised by debility, and especially in paludal, syphilitic, or cancerous cachexy, in some cases of anasarca, and in different circumstances in which alcoholic stimuli are indicated.

The lavements are found to act advantageously, in proportion as the individuals have been previously unaccustomed to alcoholic drinks. Thus, they are, in general, more useful in women than in men, still more in young girls, and more so in the inhabitants of the country than those of Paris. Until the patient becomes accustomed to them, they induce a kind of drunkenness, but very different from that following the swallowing of wine; and if the enema be given in the evening, so that the patient may afterwards remain quietly recumbent, refreshing sleep ensues. It is to be remarked, that effects are produced by a dose of wine, that, if swallowed, would induce little effect. It is sufficient, in slight cases, occurring in impressionable persons, to employ 150 grammes; but, in obstinate cases, 250 to 350 grammes may be required. In the chlorotic, it seems much to hasten the cure to divide the dose into two parts, administering one evening and morning. In general, from 150 to 250 grammes suffice, and it is better, if the wine is rich, to commence its use by diluting it with water. Immediately before giving the enema, the rectum should be emptied by a lukewarm injection, and the wine should be employed tepid, so as not to induce contraction of the rectum. At first, the patient should lie down, and endeavor to retain the fluid; but those who are accustomed to the treatment, retain it with little trouble in any position.—[*Bulletin de Thèrap*, 1855. *London Medical Times and Gazette.*

Fissure of the Palate. By Jules Cloquet.

An interesting memoir on this subject, with an account of six successful cases, by Dr. Jules Cloquet, is published in the *Gazette Médicale de Paris*, for March 3d. The method employed by M. Cloquet is to cauterize the upper angle of the fissure for the extent

of a few lines, by the application of the pernitrate of mercury, the hot iron, or loop of platina wire, rendered incandescent by means of the electric current. Not less than seven or eight days ought to elapse between each operation, in order to allow the parts to contract, and to consolidate the union. In one case after twenty-four applications of the pernitrate of mercury, with a pointed stick of soft wood, a fissure of the whole extent of the soft palate, caused by syphilitic ulceration, was completely united. In another case, in which the fissure was congenital, the same number of operations by means of the red-hot iron, were sufficient to restore the parts perfectly to their normal state. Where the parts are firmly adherent to the bone, they may be separated by the knife before applying the caustic, as in the ordinary operation by sutures. The operation occasions very little pain, is exceedingly simple, and requires no change in the regimen or habits of the patient.—[*Virginia Medical and Surgical Journal.*

Tincture of Iodine with Chloroform. By M. Titon.

This new preparation is a solution of iodine in chloroform; it dissolves the iodine even to complete saturation in the proportion of twenty to one hundred. This solution, containing the fifth part of its weight of pure iodine, is of sufficient density to preserve it under water, and is of a deep violet color, with a fine purple reflection. Its richness in iodine, its form (that of a diffusible stimulant) are all conditions the most favorable to the perfect action of the iodine; on the other hand the dissolution being perfect, the molecules of the metaloid are, so to speak, imprisoned in the vehicle. And this is demonstrated by dropping a few drops in a test tube filled with urine, water or saliva, when the drops fall to the bottom in a spheroidal form; and whether the liquid previously contained the appropriate reagent, or whether it is subsequently added, there is no traces of iodide of starch. If, on the other hand, we cover the mouth of a bottle holding the chloroform tincture of iodine with a starched paper, upon which, either before or after, a drop of nitric acid has been placed, a blue tint is immediately apparent upon that part of the paper impregnated with the reagents, and this result is more or less hastened if the bottle is warmed, or otherwise by the heat of the hand. We have here, consequently, a proof that the vapors of chloroform, otherwise recognizable by their agreeable odor, are charged with iodine vapor. This perfect solubility and volatility which pertain to the two bodies individually—less, however, than those of the pure chloroform—warrant a rapid and complete absorption; and the direct proof of this absorption is found in the elimination of the iodine by the secretions. Ten minutes after an inhalation of five minutes, the iodine was detected in the saliva, and in fifteen miuutes in the urine,

The chloroform solution of iodine may be used by every means of inhalation. M. Titon generally employs a phial, which is held

to one of the nostrils for two, four, or ten minutes; and the evaporation is hastened by shaking the phial or holding it in the hand. The first inspirations produce a feeling of calmness and ease, without occasioning the suffocative symptoms at times attending the inhalation of pure chloroform. The respiratory action is carried on with more freedom. In from four to six minutes, the patient feels in the nose and throat an extremely pungent sensation, which rapidly disappears the moment the inhalations are discontinued. The pungency can be obviated in inspiring the vapor in a less concentrated form, in breathing from time to time in a little fresh air. There may be felt after several inhalations a slight degree of pressure about the temporal regions, which disappears rapidly. Following the sedative action manifest when the inhalation is commenced, there is an increase of energy, the vital forces are also increased, and the quickness of perception and sensation announces that the absorbed iodine has carried its action to the nervous centres, from which it reflects a salutary influence upon the whole system. Iodine, administered in this manner, possesses evidently two advantages; in the first place the quantity may be graduated *ad libitum:* the contact of the portions, intermitting like the inspirations, the susceptibility of the organs, in allowing the duration of the treatment to be prolonged; and then the absorbing surface is of more extent certainly than by the gastro-intestinal mucous membrane.

[*Bulletin de Thérap. Stethoscope.*

Absence of Chlorides from the Urine, Diagnostic of the Onward Progress of Pneumonia.

In the April number of the Monthly Journal of Medical Sciences, Prof. Bennett gave an account of certain facts which confirmed the statements of Simon, Redtenbacher, Beale, and others, as to the absence of chlorides in the urine during the onward progress of pneumonia. The professor resumed these enquiries on returning to the clinical wards of the Edinburg hospital last summer, and in the number of the above mentioned journal for December last, he relates three cases of the disease there treated which confirm the diagnostic value of this change in the urine. In all these cases the absence of chlorides marked precisely the onward march of the pneumonia, whilst their presence indicated its cessation and was generally accompanied by the returning crepitation and commencing absorption of the exudition.—[*Stethoscope.*

Bubo.

It is seldom necessary to open a bubo. Employ counter-irritation. Take a solution of nitrate of silver (one drachm to two drachms of water), with the addition of three drops of a strong nitric acid. This is to be painted freely into the skin over the inflamed gland. It causes great pain and soreness, which is followed by rapid diminution of the gland. This treatment may be ex-

tended to other cases in which inflammatory deposits, whether purulent or fibrinous, require to be absorbed or diminished.—[*St. Louis Med. and Surg. Jour.*

EDITORIAL AND MISCELLANEOUS.

State Medical Society.—At the late meeting of the Medical Society of the State of Georgia, it was resolved to discontinue the publication of their Transactions in pamphlet form, and to furnish such papers as the Society might desire to publish, for the pages of this Journal. The present number contains the first of a series of contributions sent to us in accordance with the above resolution. The others will appear regularly, one per month. We should add, that the paper of Dr. J. M. Green, contained in our last issue, was prepared for the Society; but unavoidable circumstances prevented Dr. G. from attending the meeting, and from having it presented to the Society.

Compliment to Professor Austin Flint.—We have just received with the June No. of the Buffalo Medical Journal a fine portrait of its late distinguished Editor, Austin Flint, M. D., published and distributed by his professional friends of Buffalo, as a small testimonial of their respect and attachment. We know but few men upon whom such a manifestation of good feeling could be so meritoriously bestowed.

Dr. Charles T. Jackson.—The Sultan of Turkey has just conferred the honor of Knighthood upon our worthy countryman, Dr. Jackson of Boston, in consideration of his discovery of the Anesthetic properties of Ether. This is the second or third compliment of the kind paid the Doctor by foreign sovereigns.

Quarantine at New Orleans.—The Board of Health of Louisiana have advised the Governor of the State to issue his proclamation declaring as *infected* all ports within the torrid zone, thereby subjecting all vessels, steamers &c., sailing from such ports, to a quarantine of not less than ten days, but more if found necessary. The quarantine station is 73 miles below New Orleans. This measure will determine, if properly carried out, the question of the local origin of yellow fever in that city.

Professorial changes.—Dr. H. H. Smith has been appointed Professor of Surgery in the University of Pennsylvania, in place of Prof. Gibson, whose resignation we announced in our last. Dr. L. S. Joyner has been appointed

Professor of Institutes, &c., in the Medical College at Richmond, Va., in place of Prof. Brown. Sequard, resigned; and Dr. A. E. Petticolas, Professor of Anatomy, in lieu of Prof. Johnson, who was lost at sea.

Horse-flesh.—M. Jeoffroy-St. Hilaire has been recently delivering Lectures to the good people of Paris, upon the value of Horse-flesh as food, and recommends it as a good substitute for beef.

Chloroform in Hydrocele.—Prof. Lazenbeck, of Prussia, injects a drachm or two of Chloroform in lieu of the Tr. Iodine in common use, and thinks it decidedly preferable.

Explanation.—A correspondent wishes to know what are the ingredients referred to in the Recipe upon page 314 of this Journal as "speciei pro conf. arom." By referring to the U. S. Pharmacopœia, he will find that the aromatic confection is made with an "aromatic powder," consisting of cinnamon and ginger, of each ℥ij. and of cardamon and nutmeg, of each ℥j., well pulverized and rubbed together. These are, therefore, the articles referred to in the prescription.

AMERICAN MEDICAL ASSOCIATION.

Proceedings of the Eighth Annual Meeting, held in Philadelphia, Pa., May 1 to 4, 1855. (Specially Reported for the New Jersey Medical Reporter.)

On the morning of Tuesday, May 1st, at 11 o'clock, the Association assembled in the spacious hall of the Musical Fund building, and at 11½ A. M. was called to order by the President, Dr. C. A. Pope, of St. Louis, the Vice-Presidents taking their seats on either hand of the President. The ex-Presidents were invited to take seats on the platform.

Dr. Isaac Hays, of Philadelphia, chairman of the Committee of Arrangements, on behalf of the Profession of Philadelphia, extended a cordial greeting to the members of the Association. Dr. Hays then stated that 337 delegates had registered their names.

The President, Dr. Chas. A. Pope, being called upon, delivered the annual address, as follows:—

Gentlemen: With feelings of great pleasure, I meet you, and greet you, on this occasion.

For high and useful purposes, have we assembled from the wide extent of our beloved country. The elevation of a noble profession—the promotion of science—the good of humanity—these have been, are, and will continue to be, the objects of our Association. Whether we have, thus far, done much or little, our sole aim has been the advancement of the best interests of our fellow men. I shall not assert that we have done as much as we might have done, or that the course hitherto pursued by us, is so perfect, as to admit of no improvement. Were such the fact, and were the Association a firmly established institution, I might have experienced more hesitation in the selection of a theme for the present occasion. And since we cannot, as yet, I think, urge such a claim, the few suggestions which I

shall offer, are made with becoming diffidence, but at the same time with a deep sense of their importance to the welfare and perpetuity of our Association.

Some strictures on our proceedings, in medical and other journals, have appeared within the last year, as well as in previous years. I shall not here blame the authors of them. They are doubtless, as proud of our noble profession as we, and equally with us, anxious for the advancement of its interests and its honor. I thank them for their suggestions. All of us are ready to hear them and to profit by them. If any more effectual mode of arriving at truth can be devised, than that which we have heretofore pursued, all of us are ready to follow it, and would rather thank than quarrel with those who may propose it.

Physicians have an almost superhuman mission to fulfil. The goal of their ambition, and their hopes, and their duty, stands at the *ultima thule* of human capacity—nay, rather beyond it. It cannot, indeed, be said, that their duties are beyond their powers, but their ambition, their hopes, their wishes certainly are. They would gladly know, not only all the secrets of organization, but those also of physiology, pathology, and therapeutics. To arrive at such knowledge, is perhaps, beyond the attainment of the human mind. Multiform are the elements which enter into the problem of health and disease. Health, is, itself, a constant change of composition—diseases are ever-varying changes, supervening on this.

Do we now know, with all our advancement, and after all the toil of our predecessors for two thousand years, the exact changes in which any disease, the fevers for instance, consists? And even when we shall have learned these, so as to understand them as well as the most ordinary chemical changes, the ever-varying character of most diseases, and the inward disturbing influences upon them, of the mental and moral emotions, would require to follow them, a continued stretch and power of intellect, of which it is doubtful if man be capable. This exactness of knowledge is not, I grant, necessary to the very successful practice of medicine. Our profession can render great and important services to man without it, but with it, it would be still more serviceable. To it our ambition tends. To this perfect knowledge we aspire. Although we may never reach, we can yet eternally approach it. In the vast region of our researches, there is no probability that human genius will ever, Alexander like, weep for the want of unconquered provinces. Beyond the conquests of the future heroes of the profession, there will always be a boundless field for the ambitious and philanthropic explorer. In the language of a western student, "the science of medicine, like the liver of Promethus, is sufficient to glut the eagles of all time."

The object of this Association is to do something to advance the profession towards the far-distant goal of perfection—to aid the solution of some of the problems and enigmas of life and organization—to add some material to the growing temple, whose foundations were so firmly laid by the Coan sage—and to do its part, as best it may, in the cause of humanity. Nor do I think, that so far, it has altogether failed. Many valuable contributions to science have been elicited—professional ambition has been stimulated—an *esprit-de-corps* has been successfully evoked and established. The strength of the profession has acquired additional power by the union of its members. This Association has been to physicians, what the railroad and electric wires are to commerce, and the interchange of useful knowledge to States and nations. It has made us one, and as I have just remarked,

in unity there is power. This association has stimulated thought. Chaotic and void, would forever remain the masses of facts, accumulated by the observations of ages, but for the co-ordinating and logical power of reason. It sits in judgment on the silent phenomena, as a "refiner of fire, and a purifier of silver." It forces the voiceless facts to mount the tripod of the oracle, and speak forth words of wisdom. The scalpel, the crucible, the microscope, may be subsidiary to its purposes and ends, but they cannot supply its place. Fixed and patient thought in medicine, as in the other departments of science, is the Aladdin's lamp that lights the footsteps of the discoverer. To stimulate attention and thought, is to accelerate many a new discovery—to hasten the advent and establishment of important principles yet in the womb of the future. May not our Association do this more effectually than it has hitherto done?

Let all the contributions be read and attentively considered. Such a course would certainly be more encouraging, as well as more respectful, to their authors. Let the reports be deliberately and fully discussed, and let them go forth to the world with the sanction or criticisms of the Association. This would require time, it is true, but if we have time to meet at all, surely a few days would make but little difference. The good that would be effected would yield a tenfold compensation for the time employd. Every one must admit that three or four days is too short a time for the Association rightly to fulfil its annual mission.

I would, moreover, respectfully suggest that time be taken for the discussion of some of the leading topics of medical philosophy. Amongst these, may be mentioned the nature, causes, and treatment of cholera, yellow fever, *et cetera*—hygiene, and the laws of health affecting masses of men—quarantine—the causes of mortality among children—the chemical and vital doctrines of life. Questions like these, indicated a year in advance for discussion, would excite a carefulness of investigation, and a degree of attention and thought which could not fail to clear away much of the darkness and doubt in which they are yet shrouded. Nothing so sharpens the intellectual powers as public debate. It fixes attention, and strains to the utmost every faculty. I have no hesitation in saying that facts enough have been accumulated to establish great and general principles, of which the medical world is yet in ignorance or doubt. Nothing would contribute more to demonstrate these principles than the collision of matured intellects in public debate. What a mass of facts, and argument, and demonstration would be brought to bear, on any of the subjects alluded to, if some of the best minds in the profession were to debate them, after a year's preparation! Observed facts are the crude materials of science—the intellect is the master builder of its august temple.

I make these suggestions for your consideration. All the scientific meetings in this country and in Europe, employ more time than ours has hitherto employed. Evidently we must protract our sessions, if we would render them as serviceable to science as they may be. No member of the Association will be required to remain longer than suits his wishes or convenience. Some fifty or sixty, more or less, would always be found to listen with eagerness to scientific papers, and engage with pleasure in scientific discussions.

The time has probably arrived, for a change in our plan of organization, which will admit of the selection of a permanent place for the future meetings of the Association. There are evident advantages incident to both the migratory and stationary plans. These might, perhaps, be easily

reconsiled and secured. A proposition, if I mistake not, was made some years ago, by the Smithsonian Institution, and I would respectfully suggest, whether it would not be in accordance with the best interests of the Association, to hold biennial meetings in Washington, and the alternate ones, as now, at different points of our common country. We might thus secure all the advantages of a fixed abode, in the way of preserving the archives, making collections, etc., whilst by meeting in various localities, we could not fail to excite that wide-spread interest among the profession, and obtain such accessions of new members as would greatly enhance the high and useful objects of our Association. Should this proposal meet with your approbation, I would further intimate that policy would perhaps require the meetings of the Association at the National Capital, to be held in the years of the short sessions of Congress.

I shall say but little of the legislative duties of the Association. I shall say nothing of the propriety or impropriety of getting laws passed to regulate the practice of medicine, and furnish standards for candidates for the Doctorate. Perhaps the Association can do but little in this respect. Ours is a popular government, and the people are disposed to allow the largest freedom in everything pertaining to medicine, medical schools, and physicians. Laws passed against quackery one year, are revoked the next. Our country is the paradise of quacks. All good things have their attendant evils, and this unbridled liberty is one of the evils of a popular government. May we not hope, however, that even this evil may disappear, as general education and the cultivation of the masses advance? At any rate the people are not yet disposed to put down the quacks, nor to require too high a degree of qualification for those of the regular profession. After all, laws can make only mediocre physicians. They can require the candidates to know only so much—to be qualified to a certain degree; and this degree will always be far lower than that to which the true lovers of knowledge would attain, without any legislation on the subject. The greater lights of the profession cannot be manufactured after any process of legislative enactment. Thirst of knowledge, self-love, philanthropy, burning ambition—these make the great physician and surgeon. These have made all the worthies of the past—not legislation. Legislation cannot drive the drone to the proud heights of professional eminence. When these heights are reached, it will be seen that the successful aspirant has been stimulated by a stronger power.

To him the laurel blossoms of renown and the life-giving mission of his art, are dearer and more attractive than was the mystic bough of the sibyl, to the eager Æneas, or, than the golden apples, guarded by sleepless dragons, to the Hesperian daughters.

Whatever course you may think proper to pursue, I am sure that your objects will be, the advancement of science—the good of mankind—the honor and glory of the profession. We have the dignity and character of a noble calling to sustain—of a profession which has numbered, for two thousand years and more, some of the wisest and best men in all countries and all times. It is no trivial matter to sustain the rank and respectability of a vocation which can boast of a Hippocrates, a Harvey, a Hunter, of the most erudite and beneficent of sages and philanthropists the world ever saw—of a profession which has furnished to every nation its *clarum et venerabile nomen.*

On the eve of the battle of the pyramids, Napoleon exclaimed, Soldiers! from the height of yon monuments, forty centuries look down upon you.

Gentlemen, from the heights of past ages, countless worthies of our God-like profession point and beckon to a goal more elevated than that which attracts legislators and conquerors, Solons and Cæsars.

The Committee on Prize Essays reported through Dr. Réné La Roche. The committee had received six essays in competition for the prize offered by the Association. But, although these essays evinced much ability and extensive learning, but one was decided to possess those qualities, which deserved the award of the prize. It was entitled "STATISTICS OF PLACENTA PRÆVIA." The name of the author was announced as Dr. James D. Trask, of White Plains, Westchester County, N. Y. Referred to Committee on Publication.

Dr. Thos. Reyburn, chairman of Committee on Epidemics of Missouri, Illinois, Iowa and Wisconsin, read an abstract of the report submitted, which was, on motion, referred to the Committee on Publication.

At this stage of the proceedings, Dr. White, on behalf of the committee to whom was referred the resolution and amendments respecting permanent membership, submitted a report, recommending the adoption of the following resolutions:—

Resolved, That no permanent member who is not present at an annual meeting of this Association, shall be required to pay the usual assessment; but no such permanent member shall be entitled to receive a copy of the printed proceedings of the meeting, unless by paying a sum equal to that assessed upon those who were present at such meeting; and that all the names of permanent members that have been left off the published list, be re-inserted in the next volume of *Transactions*.

Resolved, That no assessment whatever shall be made against members by invitation, but that they also be entitled to a copy of the printed *Transactions* by paying the sum assessed upon delegates in attendance.

The Chairman of the Committee on Nominations recommended the following officers for the ensuing year:—

President—Geo. B. Wood, of Pennsylvania.

Vice-Presidents—Wm. M. Boling, of Alabama; Daniel Tilden, of Ohio; D. Humphrey Storer, of Massachusetts; Grafton Tyler, of the District of Columbia.

Secretaries—Francis West, of Pennsylvania; R. C. Foster, of Tennessee.

Treasurer—Caspar Wister, of Pennsylvania.

Committee on Publications—Francis G. Smith, of Pennsylvania, Chairman; Francis West, of do.; R. C. Foster, of Tennessee; Samuel L. Hollingsworth, of Pennsylvania; H. S. Askew, of Delaware; Samuel Lewis, of Pennsylvania.

The vote was taken on the motion of Dr. Palmer, "that the next meeting be held at Detroit," and it was agreed to by a large majority.—[Much applause.]

Dr. Foster, the newly elected Secretary, tendered his resignation, which was accepted.

Dr. Brodie, of Michigan, was nominated for the office, and elected by acclamation.

Dr. Hunt, of Buffalo, read an abstract of his report on the Hygrometrical state of the Atmosphere in various localities, and its influence on Health.

During the reading of this valuable paper, a motion was made and unanimously adopted, "that the desultory conversation of members be done down stairs."

Dr. Hunt's report was accepted, and referred to the Committee on Publication.

At the request of Dr. Hamilton, we copy his report from the Buffalo Medical Journal, as it is more complete.

"Dr. Frank H. Hamilton, of Buffalo, N. Y., then submitted a report on "Deformities after Fractures." The report was not complete, the author having only considered fractures of the ossa nasi, septum nasi, superior maxilla, inferior maxilla and clavicle. Copious statistics accompanied each fracture.

"Dr. Hamilton said he had a word to say which did not belong to the report. Prosecutions for malpractice have become so frequent that surgeons were alarmed, and not a few were abandoning the profession, or refusing altogether to undertake the treatment of grave surgical accidents, and especially of fractures. So frequent were these prosecutions that members were no longer surprised at such statements. If they had heard the speaker say that lawyers were abandoning their profession from this cause, they would have been startled, but to us the fact is familiar.

"It is proper for us, then, to interrogate ourselves. Why is it that we are held to an accountability so much more strict than any other professional men, or than any other artizans? It is because there are jealous and designing men in our own ranks who instigate these suits? No doubt such men may be found, but only as an exception. The fact is that surgeons have sometimes been mulcted in damages simply because the jury believed, from the united character of the medical testimony, that it was a conspiracy, and the more conclusive the testimony, the more certain, with some jurors, is the defendant to suffer.

"Is it chargeable to the members of another profession—to the lawyers? There may be some men in the profession of law, also, who, driven by the sheer necessity of their circumstances—by their extreme poverty, or who, without any such apology, with only loose notions of right and wrong, encourage and undertake such suits—such are the men who hang about the tombs in New York, and who may be found, more or less, in every town—but the speaker has reason to believe that honorable and intelligent lawyers seldom countenance these prosecutions. That eminent jurist of the State of New York, Joshua Spencer, has told Dr. Hamilton, that for himself he does not think he ever commenced a suit of this character, although he has been frequently retained as counsel, and he believes his brethren, generally, look upon these complaints with suspicion and refuse to meddle with them.

"Where, then, must we look for an answer to the question, Why are these prosecutions against surgeons so frequent? Let the gentlemen be assured, the causes are to be found in the *very imperfections of our art, and in our own unwillingness to admit these imperfections.* Surgeons have claimed too much, and it cannot certainly be expected that the world will demand of them less than they claim for themselves. Again and again surgeons have said that a fracture of the femur might be generally made to unite without any shortening, while the fact is not so. Malgaigne, who is eminently an honest man, says, to make this bone unite in an adult person, where the fracture is sufficiently oblique to prevent the ends from supporting each other, is "simply impossible" (*simplement impossible.*)

"Let the profession be wiser in future and acknowledge that they cannot perform impossibilities."

The abstract and remarks of Dr. Hamilton excited great interest; on motion the report was accepted and referred to the Publishing Committee.

Dr. Chas. Hooker, of New Haven, read an abstract of his report on "Diet for the Sick," which lays down laws for the goverment of diet under various diseases, and specifies the particular articles which may be given with benefit.

Dr. Watson offered a resolution providing for the appropriation of $1,000 to pay for the stone for the Washington Monument, which was adopted.

The Secretary read a special report from Dr. Wm. H. Byford, of Evansville, Indiana, upon the Pathology and Treatment of Scrofula. This paper gives an account of the nature of the disease, its varieties, causes, effects, and treatment. Referred to the Committee on Publications.

Dr. N. S. Davis, of Chicago, presented a report on the "Nutritive Qualities of Milk, and the influence produced thereon by Pregnancy and Menstruation in the Human Female, and by Pregnancy in the Cow; and also on the question whether there is not some mode by which the nutritive constituents of milk can be preserved in their purity and sweetness, and furnished to the inhabitants of cities in such quantities as to supersede the present defective and often unwholesome modes of supply." The report says, that when railroads were opened into the interior of the country, it was said that milk would be furnished to residents of cities in the purity that it was found on farms; but a sufficient time had elapsed to demonstrate that such is not the case. The conveyance of the milk from the farm to the cars, the transit on railway, and the time lost in its delivery throughout the city, it was clearly shown, had the effect of making it unfit for the nourishment of a child. During the past half century experiments had been made with a view of preserving milk in its pure state, yet it was but recently that a discovery had been made by a gentleman in New York, which was to evaporate the water, and mix with white sugar, which rendered it what is termed, solidified milk. In his practice he had used this improved milk for the nourishment of infants with the most gratifying results, and after having kept it for three months; and he knew of its having been kept twelve months without any injury to its qualities.

Dr. Isaac Hays, from the Committee of Arrangements, announced, that 520 delegates were now enrolled.

Dr. Condie, of this city, submitted a voluminous report upon the subject of Tubercular Disease, accompanied by a vast array of facts, the gathering of about three years. He stated that the report would make at least 500 printed pages. The opinions advanced, he said, were "very heterodox."

[CIRCULAR.]

To any Medical Gentleman of the United States or Canada.

DEAR SIR: The Committee appointed at the last meeting of the American Medical Association to investigate certain Statistics of Hydrophobia, bearing upon municipal regulations, have received but six communications detailing only sixteen cases of Hydrophobia, (some of which, however, are exceedingly interesting, and for which the Committee desire to make grateful acknowledgments to the gentlemen forwarding them.) Under these circumstances, the Committee are unwilling to do more at this time than to report progress and ask to be continued.

The object we have in view is not to enlighten the *profession* upon the subject, but to bring the knowledge already in possession of medical men to bear upon the *public mind*, and influence our civil authorities in their municipal regulations regarding Hydrophobia. We believe that facts en-

tirely militate against restricting "Dog Laws" to hot weather; and we think the advancement of science demands that this remnant of by-gone superstition should be purged from the statute-book. In Prussia, Poland, France, Russia, and many other countries in Europe, much attention has been given to this subject, and it is important in accomplishing our object, that we should ascertain, as far as practicable, how Hydrophobic Statistics in our extended country will compare with those in foreign countries, and may we not hope that, through the facilities afforded by the extensive ramifications of our cherished Association, the necessary statistics for the United States and Canada may be obtained?

The Committee are unwilling to think that want of interest in a subject so important is the cause of their receiving so few communications, but rather that the knowledge of what was wanted was too circumscribed, if not too indefinite, and the time necessary to obtain it entirely too limited.

In a measure to remove these objections, the Committee have prepared this Circular, and would respectfully invite communications upon the subject from Medical gentlemen in any part of the United States or Canada, who, either in their own practice, or as counsellors in that of others, may have witnessed cases of hydrophobia in *man* or *brute*—stating the day and month of *inoculation*—the period of *attack*—the *duration* of the disease—and, if in the human species, the *name*, *age*, *temperament*, *sex*, and residence of the individual.

The Committee would also request you to state whether in the place of your residence any "Dog Laws" have been enacted; if so, to what period of the year, if any, they are restricted; and what has been the result of their operation.

An early reply to this circular will enable the Committee to arrange the facts and prepare a report for the meeting of the Association in 1856.

We remain, &c., Thos. W. Blatchford, A. D. Spoor, } *Committee.*

Troy, 24*th April*, 1855.

Communications to be addressed to Dr. Thos. W. Blatchford, Troy, N. Y.

P. S. If the Medical journals and newspapers throughout this country would call the attention of their readers to this subject, either by publishing this circular or otherwise, it would greatly facilitate the object the Committee have in charge.

Dr. Mussey, of Ohio, read an interesting report upon the Use of Alcohol in Health and Disease. It abounded in facts illustrating the effects of alcohol upon the human system, and evinced extensive reading, and a laborious collation of medical testimony. Referred to the Committee on Publications.

A letter was read from Dr. R. J. Breckenridge, of Ky., chairman of Committee on Medical Literature, announcing that his report was ready, but that he was not able to present it himself, and asking its reference to the Committee on Publications.

A communication was read from Dr. W. H. Anderson, of Mobile, chairman of Committee on Medical Education, setting forth that his duties requiring an extensive foreign and domestic correspondence, his report was incomplete, but would be ready in season for publication in the *Transactions*.

Dr. Hays stated that the whole number of names registered now, amounted to 523.

The Committee appointed at St. Louis, to whom had been referred the

paper of Dr. Phelps, entitled "Religion an Element of Medicine, or the duties and obligations of the Profession," reported, through Dr. J. L. Atlee, who moved that it is inexpedient to publish Dr. P.'s paper in connection with the transactions of the Association.

Dr. A. J. Semmes, of Washington, District Columbia, offered the following which was adopted:—

Resolved, That a committee of three be appointed to report to the Association, at its next annual meeting, what measures should be adopted to remedy the evils existing in the present methods of holding coroners' inquests by incompetent persons, by which the lives and liberties of the innocent may be jeopardized, and the ends of justice frustrated.

Dr. Semmes, of Washington, Dr. Hyle, of Wilmington, and Dr. Condie, of Philadelphia, were appointed.

Dr. Alfred Stillé offered the following resolutions:—

Resolved, That a Special Committee of five be appointed to report at the next meeting of the Association on the following question: Might not the present system of repeating the same lectures to the same classes, during two successive terms, be usefully modified by extending the lectures of each chair over two sessions, so as to embrace a systematic and complete discussion of each of the following subjects:—

1. Special, Regional, and General Anatomy, including illustrative references to Morbid Anatomy.
2. Inorganic, Organic, and Pharmaceutical Chemistry, and Toxicology.
3. General and Human Physiology; Hygiene; Medical Jurisprudence.
4. Medical Botany; Materia Medica; General Therapeuties.
5. General Pathology; Morbid Anatomy (Systematic); Practice of Medicine.
6. General Surgical Pathology, or Institutes of Surgery; Mechanical, Operative, and Medicinal Surgery.
7. Obstretrics; Diseases of Women; Diseases of Children.
8. Hospital Clinical Medicine and Surgery.

Resolved, That the Committee, at an early day, address the several Medical Colleges, in regard to the proposed plan of instruction, requesting from them an official expression of opinion upon its merits and feasibility.

The Chair appointed the following gentlemen as the Committee, to whom the subject is referred:—

Dr. Alfred Stillé, of Philadelphia, Chairman, Prof. Samuel Jackson, Philadelphia, Dr. John Bell, Philadelphia, Dr. John Watson, New York, Dr. J. L. Cabell, Charlottsville, Va.

Dr. Corson, of New York, read a volunteer report on the Influence of Lead on the Heart, which was referred to a special committee of three for examination.

Special Committees.—Dr. Lewis H. Steiner, of Washington, D. C., on Strychnia—its chemical and toxicological properties.

Dr. Ashbury Evans, of Covington, Ky., on Tracheotomy in Epilepsy.

Dr. J. Taylor Bradford, of Augusta, Ky., on the Treatment of Cholera.

Dr. Chas. Q. Chandler, of Rocheport, Mo., on Malignant Periodic Fevers.

Dr. H. A. Johnson, of Chicago, Illinois, on the Excretions as an index to the Organic Changes in the System.

Dr. Henry J. Bigelow, of Boston, Mass., on Microscopical Investigation of Malignant Tumors.

Dr. E. H. Davis, of New York, on the Statistics of Calculous Diseases, and the operations therefor.

Dr. J. S. Carpenter, on the Treatment and Curability of Reducible Hernia.

Dr. A. J. Fuller, of Maine, on the Best Treatment of Cholera Infantum.

Dr. William B. Page, of Philadelphia, on Injuries of the Joints.

Dr. Wilson Jewell, of Philadelphia, on the Statistics of Mortality in the United States.

Dr. J. Knight, of New Haven, Conn., on Endemic Fevers.

Dr. P. H. Cabell, of Ala., on the Native Substitutes for Cinchona, indigenous to the Southern States.

Dr. James M. Newman, of Buffalo, N. Y., on the Sanitary Police of Cities.

Dr. L. M. Noble, of Le Roy, Ill., on Puerperal Fever and its Communicability.

Dr. J. M. Freer, of Chicago, Ill., on the Progress of General and Descriptive Anatomy.

Dr. J. W. Corson, of New York, on the Causes of the Impulse of the Heart, and the Agencies which influence it in Health and Disease.

Dr. D. Meredith Reese, of New York, on the Causes of Infant Mortality in large Cities, the Source of its increase, and the Means for its Diminution.

Dr. Mark Stephenson, of Vermont, on the Treatment best adapted to each Variety of Cataract, with the Method of Operation, Place of Election, Time, Age, &c.

Dr. J. B. Coleman, of New Jersey, on the Effect of Mercury on the Living Animal Tissues.

Dr. T. G. Richardson, of Louisville, Ky., on the Diversity of the Venereal Poison.

Dr. J. B. Flint, of Louisville, Ky., on the best mode of rendering the medical patronage of the National Government tributary to the honor and improvement of the Profession.

Dr. M. M. Latta, of Goshen, Indiana, on whether there are any means by which the growth of the Fœtus in Utero may be controlled without injury to mother or child.

Dr. Thos. Miller, of Washington, D. C., on Toxicology.

Dr. E. R. Peaslee, of Hanover, N. H., on Inflammation, its Pathology, and its relation to the Reparative Process.

Dr. D. D. Thompson, of Louisville, Ky., on the Remedial Effects of Chloroform.

Dr. Wm. Clendennin, of Cincinnati, Ohio, on Epidemic Erysipelas.

Dr. C. G. Comegys, of Cincinati, Ohio, on the State of the Urine in Tubercular Disease.

Stomachic Pill.—The following is the prescription for an excellent dinner pill. We copy it from the Pharmacopœia of Guy's Hospital :—

Take of powdered capsicum, ℥i.; powdered rhubarb, ℥ij. Make into a mass with treacle, and divide into sixty pills. Two or three to be taken every day before dinner.—[*Medical Examiner.*

Lotion of the Chlorate of Potash.—In the Middlesex Hospital, Mr. Moore, and also several of his colleagues at his suggestion, have been largely using a lotion of the chlorate of potash as a dressing for unhealthy sores. It is considered to have been very successful. The strength has been from two to three drachms to the pint of water. It has been freely applied on lint.

[*Med. Times and Gazette.*

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ORIGINAL AND ECLECTIC.

ARTICLE XXI.

Notes on the Epidemic Fever of 1854. By P. M. Kollock, M. D., Professor of Obstetrics in "the Savannah Medical College."

Savannah, August 11th, 1854.

The weather during the last month (July) has been intensely hot—I have never suffered so much from heat in my life; the thermometer, in the shade, rose repeatedly to 94° in my library, where, in ordinary seasons, it has rarely attained a more elevated point than 86°. During this time we have had very little rain.

Within the last week or ten days there have been cases of *coup de soleil*, and we now have cases of fever, terminating in black discharges from the stomach, of a "coffee ground" character.

Up to this time (Aug. 11), some six cases have occurred—four of these in the "Savannah Poor House and Hospital." One case occurred in the female ward, (of which I have charge,) in a young Irish girl, who came in with fever, for which she was treated with calomel and quinine, having been purged previous to her entrance. She complained of headache and thirst; no tenderness of epigastrium; skin dry; pulse frequent; tongue slightly furred. Five or six grains of quinine (which had been administered on her entrance) were repeated, combined with two grains of calomel, in twelve hours. In eighteen hours after, she discharged "coffee ground" matter from her stomach, and died before I saw her again. No autopsy.

Aug. 11. I visited Mr. R——; German; music teacher: has resided in Savannah for several years; age — years; married;

temperate in his habits; short in stature, and thin; dark hair and black eyes. Has been going about a good deal on foot during the late hot weather, giving music lessons—is generally protected by an umbrella. His attack commenced with headache and febrile symptoms to-day. I found him with a hot, but not very dry, skin; tongue moist and clean; pulse frequent and pretty full; head hot and painful; conjunctiva of both eyes very much injected. The bowels have been opened to-day, and the abdomen free from distension; slight malaise at epigastrium. ℞. V. S. until the pulse is influenced—succeeded by vomiting of his dinner. Vomiting promoted by draughts of warm water; to be followed by administration of sulph. quinine, calomel *aa* grs. 6, iced toast water and cold applications to head.

Aug. 12. Has passed rather a restless night; head still painful; eyes injected; skin in same condition; tongue a little furred; pulse as before. ℞. Quinine, gr. 5, calomel gr. 2, toast water and cold applications to head—bowels moved; stomach quiet.

1 o'clock, P. M. Less fever and headache. Repeat calomel and quinine.

Evening. Complains of uneasiness in the bowels, and deafness from quinine. ℞. Enema of flaxseed infus., sinapism to bowels. ℞. Sulph. morph., gr. ¼, if restless.

Aug. 13, 7½ o'clock A. M. Has slept from effects of morphine. Skin natural; pulse reduced; tongue moist and furred; head easy; eyes less injected; bowels moved several times; stools bilious; abdomen tympanitic, and pain in descending colon. ℞. Flaxseed enema, which had been omitted; cold to head; arrow-root and gum water. Calomel, gr. j., quinine, gr. 2 ss.

1 o'clock P. M. Exacerbation; head painful; skin hotter and more dry; thirst increased; restlessness; much heat about head and back of neck; pain at umbilicus; bowels repeatedly moved.

5½ o'clock P. M. Symptoms same. ℞. Flaxseed enema.

9 o'clock P. M. Same condition. Head hot; abdominal uneasiness. ℞. Scarified cups to nucha. The injection (which had been neglected) to be given, and if not followed by relief to abdominal uneasiness, a dessert spoonful of castor oil.

Aug 14. Has spent a pretty quiet night. Head still too hot; very much disposed to sleep. Continue cold applications and nourishment.

Evening. No change. ℞. Epispast. to nucha; mass. ex. hyd., gr. 2; op. gr. $\frac{1}{12}$, every two hours.

10 o'clock P. M. Improvement. Skin cool and moist; head cool and easy; tongue moist; bowels easy—blister not perfectly filled, having been removed too soon. ℞. Fer. cyan. quinine, gr. 2, every two hours. Dress blister with basilicon. Discontinue blue mass.

Aug. 16. Convalescent.

Dr. J. B. Read, who has been hard at work for a week or two among fever cases, was attacked himself yesterday (Aug. 15) pretty severely. On visiting him, I found him with hot, but moist skin, headache, eyes injected, pulse 120; some uneasiness at præcordia; pains in his limbs. ℞. V.S. ℥x. Calomel, gr. 10; sulph. quinine, gr. 6.

Saw him again in three or four hours. Very restless; complains of increased uneasiness at præcordia. ℞. Sinapism to epigastrium; ol. ricin. ℥ss.; gum water.

Aug. 16, 7 o'clock A. M. Has spent a restless night. Oil has operated several times; relieved of pain in a great measure; skin cool and relaxed; tongue moist and pretty clean—still some pain in the eyes, which are less injected with blood. ℞. Sulph. quinine, gr. 5; calomel, gr. 2, every three or four hours.

12 o'clock M. Improving. Has taken two powders. ℞. Continue.

5 o'clock P. M. Condition same. Complains of uneasiness and flatulence in bowels. ℞. Enema Lini, and continue powders.

Aug. 17. No fever; bowels uneasy. ℞. Ol. ricini. ℥ss.

Evening. Oil has operated; bowels relieved. ℞. Quinine, gr. 3.

Aug. 18. Convalescent.

Mr. D. V., aged about 50 years; married; keeps a clothing store, to which he is much confined—was attacked Aug. 12, after having been more than usual exposed to the sun. Symptoms: headache, nausea, hot and dry skin; pulse rather frequent, but not very full; tongue furred, but moist,

I was called to see him in consequence of the absence of his family physician, to whom I resigned the case, on his return. He was treated with calomel, quinine and opium, together with saline cathartics.

I visited him again, in consultation, on the 15th. His condition then was as follows:—Skin of natural temperature, and relaxed; pulse 44 in the minute; tongue furred, and rather dry at the tip; head hot; eyes injected, pupils contracted; respiration sighing; stomach very irritable—had been blistered on stomach and legs; abdomen soft; no great thirst. ℞. Cups to nucha; calomel, gr. 2, every two hours; ice to head; iced acidulated gum water for drink.

Evening. Much the same. ℞. Leeches to mastoid processes. Continue medicine.

Aug. 16. No improvement. ℞. Wine whey, alternated during the day with brandy milk toddy, arrow-root and brandy, chicken water, beef tea—most of which were vomited. Flaxseed enemata brought away dark stools (effects of calomel).

Aug. 17, 7 o'clock A. M. Head cooler, mind more clear; pulse same; has retained some brandy and water.

Evening. During the day the irritability of stomach has continued. Calomel has been suspended, and Cayenne pepper infusion substituted. This evening he has thrown up dark flocculent matter, which subsides and adheres with mucus to the bottom of the vessel. The bilious suffusion of the eyes and skin which has been present, is increased in intensity—stools clay colored. ℞. Calomel gr. j., quinine gr. 3, pip. Cayenne gr. 2, in pill, at intervals.

10 o'clock P. M. Has not retained the pill, which accordingly is discontinued.

Aug. 18. Condition much the same: skin and eyes becoming more suffused; total suppression of urine. No bile passing from bowels. All attempts to introduce articles into the stomach abandoned. Discharges from stomach small in quantity, but dark and flocculent: they are brought up by vomiting and retching—not gulped up, as is usual in Yellow fever.

Evening. Stomach a little more quiet; other symptoms the same. ℞. Burnt brandy, 1 tablespoonful; spt. ammon. arom., gtt. 10 every hour.

Aug. 19. Has retained the remedies, and vomited only once or twice during the night. ℞. Mass ex. hyd. gr. 3, ext. hyos. gr. j., every two hours.

Evening. Has retained the pills, and taken five; pulse 80; jaundice increasing; abdomen tympanitic. ℞. Ol. ricini. ℥j., every hour, with burnt brandy and spt. ammon.

Aug. 20. Death occurred this morning at 6½ o'clock, in great agony.

Capt. Odson, German; has been very much exposed to the sun, on a small sloop. I visited him for the first time August 15th. Symptoms: Great heat of skin, but some moisture; head painful; eyes injected; face very red; pulse full and frequent; tongue somewhat furred—has taken no medicine. ℞. V. S. Calomel gr. 10, sulph. quinine gr. 6. M. Ice to head; iced acidulated gum water.

Aug. 16. Great improvement: head much easier; medicine has

acted on the bowels. ℞. Quinine gr. 5, calomel gr. 2. M. Eve- three or four hours.

Evening. Continues to improve—has taken two powders. ℞. Continue.

Aug. 17. Not so well; restlessness and thirst during the night; uneasiness in bowels, and pain in head. ℞. Ol. ricini. ℥ss.

Evening. Feels better; cathartic has acted twice. Skin moist; pulse natural; tongue pretty clean; head rather hot. Repeat the oil.

Aug. 18. Remission. ℞. Sulph. quinine; calomel *aa* gr. 10; pulv. g. opii. gr. ¼. M. acidulated gum water.

Evening. Has been very drowsy all day; pulse natural, skin moist, head hot and painful. ℞. Epispast. to nucha; ice to head.

Aug. 19. Has passed a restless night: complains of feeling unwell and weak; head cooler; pulse and skin natural; tongue pretty clean at tip, some fur in middle. ℞. Ol. ricini. ℥ss.; gruel.

Evening. Skin, pulse and tongue in same condition; two stools from oil; vomited once after taking gruel. Head still rather hot: three leeches to each temple.

Aug. 20. Skin moist and natural; pulse good; tongue same as before; head cool—but complains of feeling badly—skin and conjunctiva more jaundiced; great languor of capillary circulation on surface; has had bilious stools from operation of oil; complains of burning sensation in throat; tenderness of epigastrium. ℞. Epispast. to epigast. Calomel gr. 2, opii. gr. ⅙, every two hours.

Evening. Much the same—very drowsy—blister has drawn. ℞. Blisters to legs; continue powders; arrow-root.

Aug. 21. Threw up black matter this morning early, and died shortly after,

The improvement in the symptoms of the case on the day preceding death is quite characteristic of this disease.

I was called to Mr. J. R. J., on Thursday, Aug. 17: he had been attacked with fever on the evening previous—had taken blue mass, which acted on the bowels. I found him in a remission, with cool and moist skin, complaining of a sense of chilliness when the air blew on him—had dressed himself, and was moving about from one room to the other. I ordered him to bed, and to take 5 grains of quinine.

After taking several doses of quinine, I was disposed to consider his disease at an end. Being a native of Savannah, and pretty thoroughly acclimated, I felt no uneasiness in regard to the result of

this case. I was much surprised, therefore, to find him on Sunday (20th) with a hot and dry skin, full and frequent pulse. I accordingly bled him pretty freely from the arm—gave him blue mass and quinine as long as his stomach would bear it—which at length became irritated, rendering it necessary to apply a blister to the epigastrium, and to confine him to gum water and ice.

The stomach at length became quiet; but a most intense jaundice set in, which caused me great uneasiness, and I feared that it was the precursor of "vomito prieto."

Aug. 25. Up to this time, black vomit has not made its appearance; the stomach is quiet, and bears chicken water and arrow-root; passes urine freely, but it is loaded with bile; bowels constipated; pulse about 80; skin cool and relaxed; tongue clean; thirst great; bilious suffusion of conjunctiva and skin intense. A stimulating injection brought away a large fœcal and bilious stool. He took blue mass, gr. 10, yesterday, and has had his right hypochondrium and thighs rubbed for two days with ung. hydrarg. Has enjoyed effervescing cit. sod. attenuated with chicken water.

Aug. 28. Still very much jaundiced; but his urine is less bilious, and a stool produced by stimulating enema is large, fœcal and bilious; bowels very torpid; thirst great; tongue clean; skin moist; pulse increased in frequency.

Aug. 31. For a day or two has exhibited unpleasant symptoms; morbid vigilance at night, with delirium; skin moist; pulse slow and sometimes interrupted; tongue a little furred. Ext. hyosciam. failed to quiet him, and it became necessary to administer ½ grain of morphia.

To-day (31st) has been pretty liberally plied with porter and beef tea, and he is more quiet this evening. He takes infus. pum. virg. and ext. tarax. To night I ordered for him mass. ex. hyd. gr. 5, ext. hyos. gr. 6. M. Beef tea and porter.

Sept. 1. Bad night: very delirious; not quieted by pill; fever during night. ℞. Enema, stimulating; ½ wine-glassful of infus. serpentar., and porter, alternately, every heur, with 1 gr. quinine in each; beef tea.

Sept. 2. Has been more quiet, sleeping at intervals—stomach revolts at snake-root and quinine: continue beef tea and porter, and ext. tarax. Complexion clearer, but urine still bilious.

Sept. 3. Not so well: mind more wandering; much heat of surface.

Evening. Symptoms same. Consultation called. Nit. mur.

acid, internally and externally, recommended. Emp. g. ammoniac, cum. hydrarg. applied to-night to hypochondrium.

Sept. 5. Death occurred this morning about 6 o'clock.

Jaundice is not an unusual termination of the graver cases of this epidemic, and when unaccompanied with black vomit, is followed by recovery. In the case just detailed, as the Jeteric symptoms began to yield, Typhoid fever was set up, which destroyed the patient.

The characteristics of this epidemic are a cold stage, followed by a hot, attended with hot skin (which, however, is very frequently moist); headache; injection of small vessels of conjunctiva with blood; bilious suffusion of conjunctiva in cases tending to the malignant type; pulse frequent, sometimes full and hard; tongue clean; intense pains in back and limbs (like those of Dengue); stomach very frequently irritable, and bowels constipated; urine suppressed, partiaily—in last stage, totally; stools, in last stage, clay colored.

The confirmed cases of the malignant type have generally terminated fatally, under all kinds of treatment.

When called to a patient with considerable rigour, a full and chorded pulse, I have generally commenced the treatment with vs., followed by calomel and sulph. quinine, *aa.* gr. 10, or 10 and 5,—in 3 hours after, ol. ricin. ℥ss. or ℥i.; iced gum water, toast water, or acidulated flaxseed infusion.

In some of the first cases I saw, I continued calomel and quinine, in small doses, gr. 2 and 5, repeated at intervals. From its failure in late cases, I have not been so much inclined to continue the mercurial, but after giving as much quinine as seems proper, if the case shows a decided tendency to the yellow fever type, particularly if the stomach is irritable, I blister epigastrium and extremities and content myself with the administration of mucilaginous, iced acidulated drinks; efferveseing cit. sod., &c. injections, demulcent or stimulating, as may be requisite, sometimes sulph. or acet. morph. alone are combined with quinine.

Black Vomit, now, as in former years, must be regarded as the fatal symptom. It is brought up in small quantity, brown, flocculent, like particles of the wings of an insect, settling down in a paste mixed with mucus at and adherent to the bottom of the vessel into which it is discharged. When the discharge is profuse, it is thin and watery like coffee grounds. This last is thrown up with ease; the former, with much retching. Black Vomit occurs from the 5th to the 9th day, according to my observation. When about to occur,

and during its continuance, the pulse becomes either natural in strength and frequency, or reduced below the natural standard. The skin is natural as to temperature and moisture—frequently the patient expresses himself as feeling very comfortable, but sometimes becomes more restless and uneasy.

I have not found any remedy or course of treatment to be depended upon in this stage. In some rare cases of recovery, the remedies which have been used, and seem to have been of service, have failed when tried in others. Brandy, creosote, infus. cayenne, acet. plumb. and op. have all failed in my hands. There have been two cases of recovery after black vomit in "Savannah Poor House and Hospital," under the use of croton oil—a drop being placed upon the tongue produced hypercatharsis and cessation of vomiting.

August 25. I have under treatment an Irish woman, who had been ill for 5 days, and been actively purged with calomel and jalap. I was called to her in consequence of her having thrown up a small quantity of dark brown specks, resembling fragments of insects' wings. I blistered her stomach and extremities, and gave her iced gum water. After blistering, although the stomach continued irritable, I determined to test the powers of quinine as asserted by some, ℈j. of the sulphate was administered, and repeated in 4 or 5 hours. After the second dose, the vomiting ceased in a great measure; but as some irritability remained, effervescing cit. soda, and 10 grs. more of quinine were given. This last dose was succeeded by great uneasiness, vomiting, deafness, and flushed face. The pulse became very much lowered, tongue remained clean and moist. Ice was applied to head; stimulating enema and soda continued. She became comatose, and died in a few hours. The cerebral symptoms I attributed to the quinine.

Beside the decided cases of yellow fever (which very generally terminate fatally,) there are numerous milder cases of remittent fever prevailing at this time (August 25 to 28,) and from the commencement of the epidemic, which yield very readily to ordinary mild treatment, and many cases would doubtless do well without medicine.

I generally bleed where it seems to be indicated, and where the skin and tongue are moist, give calomel and quinine in combination, notwithstanding the presence of considerable cephalalgia.

These are the cases, which the disciples of Hannemann on the one hand, and the believers in the powers of tr. mur. ferri. on the other, vaunt as cures of Yellow fever.

It is a great time for humbugging—unsophisticated people are made to believe that they are cured by infinitessimals, while they are swallowing heroic doses of quinine, and are well roasted with sinapisms.

August 31. The epidemic continues to advance westward (having commenced in the extreme eastern limits of the city.) I think the hot stage is becoming more protracted, and shows a greater tendency to return after remission. In a large number of instances this has not been the case.

I have seen within a day or two, more bilious and furred tongues—which I consider favorable. The bowels are not so irritable as in the epidemics of former years. Patients bear purging with one or two teaspoonsful of castor oil. Where the epigastrium is tender and the stomach irritable leeching proves beneficial—although in the malignant cases, the hemorrhage from the bites is apt to be excessive and difficult to control.

The irritability of stomach before the appearance of black vomit is frequently allayed by infus. capsici. I think this remedy indicated after disappearance of fever, when the pulse sinks below natural standard, in force and frequency—where there is restlessness, sighing and epigastric malaise, or where there is no definite sense of pain. Accompanying such symptoms, the conjunctiva may become tinged yellow, and the countenance bronzed—or, on the contrary, the eyes and skin may remain perfectly clear and natural.

A very fine looking Irish girl died in the hospital this week—the approach of the mortal stage being alone indicated by the slow depressed pulse, and sighing respiration.

Sept. 2. The welkin is at present ringing with the praises of the wonderful powers of tr. mur. ferri. in the cure of Yellow fever. One physician informs the public, through the newspapers, that he has cured, in a short time, 150 cases with this remedy alone—and recommends the citizens to take it in anticipation, as a prophylactic. He says that it medicates the blood, acts as an astringent on the blood vessels of the stomach, and prevents their pouring out black vomit—another calls it "a refrigerant diaphoretic." I am assailed on all sides with the questions, "have you tried it?"—"why don't you try it?"

A trial was made with it by Dr. Bulloch, in the Savannah Poor House and Hospital, some weeks since, and it was abandoned as of no service. But to be able to give a satisfactory answer to my querists, I have determined to give it a fair trial, and accordingly

have put some nine or ten cases on the use of it, in different stages of the disease.

Sept. 3. The immediate effects of the treatment seem favorable: inflammatory symptoms, instead of being aggravated, appear to be alleviated; the dry, hot skin, cephalalgia, thirst, excited pulse, have all subsided. I begin to think, that either the remedy possesses qualities which I had never attributed to it, or that there is this peculiarity in the epidemic disease with which we are contending.

I have found cases within a few days with more protracted paroxysms, and it is remarked by physicians that the cases are more manageable.

Sept. 5. A very few hours have served to prove the fallacy of appearances in favor of tr. mur. ferri. Its irritating effects on the stomach have been manifested in every case in which I used it.

Timothy Murphy, (Irish laborer,) middle aged, attacked with fever Sept. 2d. I found him in bed—had just vomited the contents of his stomach, consisting of his last meal.

Symptoms: Skin hot, but moist; headache; eyes injected; pulse frequent, not remarkably full, and compressible; tongue pretty clean; bowels relaxed. Has taken no medicine. ℞. Tr. mur. ferri. gtt. 25, ever two hours, in a tablespoonful of water. His symptoms improved rapidly, and by the third day he was free from all febrile appearances; but he complained of uneasy sensations in the abdomen, for which he took some castor oil.

Mrs. F., who had been treated in the ordinary way for fever, and was nearly cured, I put upon the use of tr. mur. ferri. She took two doses, each 20 drops: this was followed by such intense heat and burning in the bowels, that she became alarmed and would take no more. These sensations continued to annoy her for several days after the abandonment of the medicine.

N. C. Hopkinson, engineer on the Central Rail Road, native of New York, has spent several summers in Savannah. He has had repeated light attacks of fever during this summer while in pursuit of his business, for which he took quinine without lying up. Previous to my seeing him, he had taken some cathartic pills, and finding him in a remission, I advised him to take five grains of quinine. His skin was hot, but moist, pulse frequent, but not very full and soft; tongue not much furred; headache, eyes injected.

In about twelve hours took five grains more of quinine. I then commenced with tr. mur. ferri gtt. 25, every two hours. He took .

the medicine one day and night, at the end of which time I remark as follows: Has passed a restless night; skin dry, not very hot: pulse 80, having been previously 100; eyes injected; head hot and uneasy; abdomen tender; tongue furred. Has been very much purged during the night; stools very thin and blackened by the iron; thirst excessive. ℞. Stop the medicine. 12 leeches to abdomen; ice to head; blister to epigastrium; flaxseed enema; gum water for drink.

Evening. Leeches have bled very freely; necessary to apply creosote to arrest hemorrhage. Head cooler; eyes less injected; skin cool and moist; purging continues; respiration sighing.

On the morning of the 5th September, I was called up to him, and found him discharging "black vomit." ℞. Strong infusion capsi. ℥ss. every hour; powerful and continued revulsion to extremities by sinapisms. In two hours the vomiting ceased, and there was more action on the surface. The capsicum and ice were continued through the day. In the evening he vomited more black matter, began to sink rapidly and mind to wander. ℞. Camphor juleps and wine freely. He died on the morning of the 6th. If the black vomiting in this case, was not caused entirely by the use of tr. mur. ferri., I have very little doubt of its contributing to the more speedy appearance of that symptom.

Sept. 5. I was desired to prescribe for the child of Mr. H., a cab-driver. Age of the child 8 or 10 years. It had been subject to fever for some time; enlarged spleen and was anæmic. A remission occurring, I prescribed sulph. quinine gr. j, tr. mur. fer. gtt. 3 or 4 every two hours.

At the end of twelve or eighteen hours, fever had entirely disappeared, and the child seemed to be convalescent, which opinion I expressed to its mother. On the morning of the 6th, I found it vomiting black matter mixed with blood. Death took place in a few hours.

A mulatto woman, of middle age, after taking some doses of the medicine, became very uneasy, vomiting of dark, suspicious looking matter occurred some hours after discontinuing the remedy. She fortunately recovered.

In the cases where tr. mur. fer. manifested effects, least injurious, I could perceive no advantage obtained by its substitution for other treatment ordinarily pursued. The result, then, of the experiment in the cases above detailed, is unfavourable, and it is perfectly clear to my mind, that this remedy is no specific for the cure of yellow

fever; but that it is positively injurious, and tends to hasten the catastrophe.

The cures which have been claimed for it, were doubtless, cases of mild Remittent and Dengue, which have been mistaken for the malignant disease by those who have "seen the elephant" for the first time.

Sept. 8th. I find that the bowels are becoming more irritable, and doses of cathartic medicine, which were only sufficient to empty the bowels at the commencement of the epidemic, at this time, produce hypercatharsis. I also find that patients do not require as much quinine, nor bear it as well as in ordinary seasons. I am not altogether certain that it is necessary to give quinine at all; in the majority of cases, there seems to be no disposition to a repetition of the paroxysm, even in cases which have no tendency to assume the Yellow fever type. Those cases which exhibit this disposition, are rather of a bilious character.

In the cases which show the Yellow fever marks, quinine is certainly injurious, inducing irritability of stomach, and hastening the advent of black vomit.

The cases which I see in the western part of the city bordering on the canal, exhibit more of a bilious character; the tongue is more apt to be covered with a bilious fur, and some of them are accompanied with dysenteric symptoms. In these cases, and at this stage of the epidemic, v. s. has to be practiced with great caution—leeching and cupping are safer.

I have under treatment, an Irish girl of very full habit, her cheeks are exceedingly red, as well as her lips. She has had a clean tongue, hot head, injection of conjunctiva; pulse frequent, but not very full nor hard. I purged her first with 10 grs. mass. ex. hyd. and ol. ricini, ℥ss., and applied six or eight leeches twice to her epigastrium, which produced very free bleeding. I feared to bleed her from the arm, on account of deficiency of force in the pulse, as well as my conviction that v.s. was not borne as well at this time as at the commencement of the epidemic. She continued, however, to have so much general excitement that I yielded to the temptation, and took from her arm 6 or 8 ounces of blood, which reduced her pulse with rather alarming suddenness, and produced faintness. Blisters were applied to her legs.

Fourth day of the disease, no fever; head still hot, but not painful; cheeks and lips still red; complains of great weakness; no irritability of stomach. I feel very anxious lest black vomit should

make its appearance to-morrow (fifth day); has no bronze color of skin: allowed chicken water. Ol. ricini. ℥ss. produced two bilious passages, which is encouraging.

Sept. 12. She is convalescent.

Within the last three or four days, I have encountered six or eight of the decidedly malignant cases, and as the expectant treatment has failed in many instances, and ptyalism (when it can be effected by mercury) is thought to have a controlling influence, I have adopted the practice. I have given 5 grs. calomel, ¼ gr. of opium every two hours; acidulated flaxseed infusion for drink. But in the majority of instances, the course of the disease is too rapid to admit of the induction of the mercurial influence.

At the commencement of the epidemic some of my medical friends claimed great success for this practice, and pursued it in every case of fever to which they were called; but I am strongly tempted to believe that many of the cases which recovered with ptyalism, would never have run into the malignant type, and would have recovered without the mercurial influence. In one of my cases ℥iss. of calomel was taken before the appearance of black vomit and of death.

The effects of leeches to the pit of the stomach were very satisfactory in many cases where there was epigastric tenderness, but they were not applicable to the hemorrhagic cases, where frequently profuse hemorrhages occurred spontaneously from the gums, nose and other mucous membranes.

In the case of a little child of Mr. Farr's, the Hospital Steward, death occurred with hemorrhage from the gums. I had directed it to be leeched, but it was omitted. I have no doubt that the hemorrhage would have proceeded from the leech bites also.

Sept. 12. I do not think the prevailing fever less malignant, nor less mortal at this time than previously. I believe that some of the mortality may be attributed to the use of mur. tr. ferri., a large number of persons having been induced to use it as a prophylactic. Dr. Wildman, its warmest advocate, died two days ago and was interred yesterday.

The deaths for some days have amounted to thirty or forty per day. To-day (Sept. 12) the number of interments was fifty-one.

It is very difficult to procure coffins to bury the dead or to get graves dug. Two corpses are put into one hearse, and I am informed that in the Catholic cemetery, a long trench is dug and the coffins are dovetailed together so as to occupy the smallest pos-

sible space. All business of every description, except that which relates to attending on the sick and burying the dead, is at an end, vessels arrive loaded with goods and cannot be discharged for want of hands.

To complete the ruin and desolation, a gale which commenced on the 8th inst., and was increased to a hurricane on the 9th, prostrated a very large number of trees in the streets, and unroofed many building which were tinned. In consequence of which, the streets have been so obstructed by the fallen trees and piles of tin, that it has been very difficult to pass through them in the day time, and utterly impossible at night, in consequence of the failure of gas, the gasometer at the gas house, having been damaged.

This epidemic has been unusually fatal to natives. Many who have left the city and gone to the upper part of the State and to the North, to avoid the pestilence, have been attacked and died.

Notwithstanding the great malignancy of the disease, however, I have met with a larger proportion of recoveries after the occurrence of black vomit than in former seasons.

Sept. 18. A child eight months old, which I have been attending for some days, threw up black matter this morning. I think this unusual in so young a subject. Its skin has been very much jaundiced for some days, for which I have given hydrarg. cum. cret.

Sept. 22. Has ceased vomiting—still jaundiced; but liver has begun to act, and stools contain green bile. Convalescent.

Sept. 23. The son of Mrs. Ball, a poor woman residing in Robertsville, (the extreme S. W. part of the city,) about nine years of age, after having had fever two days, took two doses of quinine each 2½ grains, during the day; the skin at the same time being rather hot, but moist—tongue moist, pretty clean, pulse frequent. After taking second dose, he threw up black matter from the stomach during the night of the 21st. I found him on the morning of the 22d collapsed, almost pulseless; skin cold and clammy; delirious—refusing every thing but water. ℞. Blisters to extremities. Calomel, gr. j, every two hours. The stomach having been blistered before the occurrence of these alarming symptoms.

Evening. Blisters have drawn; but none of the medicine has been taken, as he refused it. Delirium continues. Other symptoms same. Scarcely any possibility of his living through the night.

Sept. 24. Condition same. Sinapisms had been applied, according to my directions, with the effect of producing some warmth on

the surface; but the effect had disappeared. ℞. Ol. terebinth, ʒij.; mucil. gum arab. ʒvj.; one tablespoonful every hour; sinapisms.

Evening. Skin warm, pulse stronger, more quiet, rational. Vomiting of black matter, which continued through the night, has ceased. ℞. Continue turpentine mixture, every two hours, alternated with beef tea.

Sept. 26. For the relief of the jaundiced condition, he has been taking mass. ex. hyd., gr. 3, morning and evening. A secondary fever has arisen, attended with dry, hot skin, frequent pulse—but mind clear, tongue clean and moist. This secondary fever resembles very much that which succeeds the collapse of cholera. I gave him 2½ grs. of quinine this morning, which he has borne well; but it has produced no moisture on the skin.

Sept. 27. Still improving—treatment continued—recovery.

Cases at this time exhibit more of the hemorrhagic tendency than at an earlier period.

Charles Ulback, bar-keeper, German: attacked nine days since. His stomach was very irritable at first; eyes injected and suppressed; head-ache; hot skin; tongue a little furred, pointed, red at tip; lips red; thirst great; has been blistered on epigast.; has taken mild mercurial medicine; bowels have been principally moved by enemata; took ½ oz. ol. ricin., after stomach became quiet.

Liver has been very torpid; urine loaded with bile; stools clay coloured, skin and eyes jaundiced---complains of great soreness all over, at one time confined principally to the left shoulder—not relieved by morphia.

Within a few days has exhibited a tendancy to hemorrhage, slightly from the gums; but profusely from hemorrhoidal vessels. ℞. Cauterize hemorrhoid with nit. argent., apply ung. rhatan. pulv. matico and dry lint—the matico and lint answering best. Sponge gums frequently with sulph. zinc. ʒss., mel. tr. myrrh. *aa.* ʒss., aq. pur. ʒiv. Port-wine, gallic acid, beef tea, internally.

Sept. 30. Inproving very slowly: skin and urine becoming clearer under use of ext. tarax. Spirits very much depressed; complains of great numbness in left arm; excessive nocturnal vigilance, which is not influenced by the salts of morphia, porter, Hoff. anod. and water, in combination.

Oct. 1. Sleep procured last night by 45 drops of acet. opii., administered in three doses, at intervals.

Oct. 2. Hemorrhage from nose—none from gums or hemorrhoidal vessels. ℞. To snuff the powder of Matico.

This treatment was continued, and he recovered after a protracted convalescence.

J. B. Bacon. First visit, on 25th Sept. I found him in cold stage. ℞. Sinapisms to extremities, and hot mustard foot bath. Stomach irritable. ℞. Epispast. to epigastrium. As soon as stomach is sufficiently quiet, to take calomel and rhei. *aa.* gr. x., toast water for drink. When remission occurs, quinine. Took a very few grains of quinine. The hot stage lasted forty-eight hours; after which, bowels being too much relaxed, I was under the necessity of giving him Hope's mixture, and arrow-root with Port-wine.

Great restlessness ensued on the night of 27th. On 28th, stomach began to reject his drinks; looseness of bowels continued, and he passed one dark stool, resembling coffee grounds; after which, his stools became very light colored. ℞. Blisters to arms and legs; lime water and milk every hour in dose of 1 ounce: no other drink.

Sept. 29. Irritability and restlessness very much diminished; diarrhœa continues; stools like rice water discharges in cholera. ℞. Hope's mixture, ℥ss. every two hours; lime water and milk, as required; beef tea and Port-wine.

Sept. 30. Much the same: vomited dark matter last night. Has rose coloured spots on his arms, which I have seen in other cases. They are regarded by Dr. Fickling, of this city, as a favourable sign.

Oct. 1. Black vomiting; delirious; pulse good; skin of natural temperature; tongue dry, smooth, red at tip, upper part covered with brown fur. ℞. Blister to nucha. Spt. terebinth. gtt. 10, in emulsion every hour. Three o'clock, P. M., death occurred.

Oct. 3. I witnessed to-day the autopsical examination of two cases of Yellow fever at the "Savannah Poor House and Hospital." The morbid appearances in these, as well as in several other cases which occurred in August, were precisely the same as those which I have repeatedly met with in the epidemics of this character, in former years, and differ in no respect from those which are recorded of the great epidemic which prevailed in Savannah in the summer of 1820.

In one of these cases, the mucous coat of the stomach and duodenum was of a slate colour, the liver yellowish; but containing rather more blood than is usual in such cases. In the other case, the mucous coat of the stomach was of a dark red or mahogany color, with extravasations of blood here and there, under the mucous coat. The stomach contained some black matter. The liver in this case

was more exsanguine than in the other. The intestines, as usual, were deficient in bilious matters.

Peter O'Rouke, a young Irishman, who was attacked Oct. 1st, with all the symptoms of the malignant type, threw up black vomit about the fourth or fifth day. He recovered under the use of turpentine emulsion. An intense juandice remained for many weeks, from which he slowly recovered. I think I have observed more uniformly beneficial effects from the use of turpentine in the last stage of this disease than from any other remedy which I have used.

Oct. 6. A miserably poor Irishman, named Powers, died to-day, after struggling for several weeks with the typhoid form of the disease; differing in no respect from a genuine typhoid fever.

November 23d. I left the city on the 10th of October; on the day previous, only two deaths were reported, and as most of the cases which occurred, were sent by the committees of the "Young Men's Benevolent Association," to their Infirmary, which they had placed under the charge of Drs. Redwood and Hamilton, of Mobile, who had come to our assistance, the other physicians of the city had comparatively little to do.

I returned to Savannah Nov. 19th. At that time there had occurred pretty cold weather and smart frost, notwithstanding which, cases of Yellow fever continued to show themselves, principally in persons who had come from the North. During the past week ending Nov. 23d, three or four fatal cases have occurred in "Savannah Poor House and Hospital." The disease did not entirely disappear until about the last of November.

On a review of all the facts which have been stated, and summing up the evidence bearing on the case, I am led to the following conclusions:

1st. The epidemic which prevailed in this city during the summer of 1854, was the same disease which the older physicians of the place have repeatedly witnessed, and with which they are well acquainted. It prevailed in the year 1820, 1827, 1852, and occasionally in the sporadic character, in other years. It was no stranger of recent origin, wafted from the coast of Africa to our shores, as has been asserted by some.

2d. The disease was not imported in any vessel from Cuba, or some other foreign part in which it happened to prevail at the time. It originated in our midst under the combined influence of excessive heat and drought, the first acting upon masses of human beings crowded together in cities and towns, in badly ventilated apart-

ments, filthy in their habits, and breathing an atmosphere tainted by poisonous exhalations from accumulations of putrid offal, with which their domicils abound. The latter, exposing to a direct solar heat, which has never been exceeded, heaps of decomposable compost deposited in low grounds, which in ordinary seasons, are covered with water.

3d. The epidemic was composed of a variety of grades, or types, which might either preserve to the end, the character with which they commenced, or be converted into one of a more grave and malignant kind. But as a general rule, the cases which were destined to prove serious, very soon displayed the "cloven foot."

4th. No specific or systematic routine of treatment could be enjoined which would adapt itself to every case or every period of the epidemic season. Remedies which were safe and beneficial at the commencement, were not so when the disease had run half its course, and those which were adapted to this latter period, had to be abandoned at a more advanced period. The early cases were treated safely and effectually by bloodletting, the depressing effects of the remedy were hazardous after the middle of August, and topical depletion by leeches had to be substituted, while these last were not admissible towards the close of the season when the hemorrhagic cases were more rife.

5th. So far, no specific drug has been discovered for the cure of Yellow fever, and from the nature of the disease, the inference is very strong that none will be discovered. The tr. mur. ferri is decidedly not, and its employment either as a prophylactic or curative agent is unwarrantable.

6th. The nature of the black discharges from the stomach and bowels is still involved in considerable doubt. The microscope exhibits blood corpuscles, altered, and chemical reagents, and acid. It differs essentially from the hemorrhages, which proceed from mucous membranes, leechbites, hemorrhoids, and punctured or abraded cuticle. We know of no remedy on which much reliance can be placed in the treatment of this symptom; I think turpentine promises as much as any which I have tried.

7th. The morbid appearances on dissection are to be found principally in the mucous coat of the stomach and duodenum, and in the liver. The former is either of a slate or mahogany color, or intensely injected with florid blood; the latter is pale, bloodless, dry, and little, or no bile to be found in the intestinal canal.

8th. No fact has come to my knowledge which will warrant the

belief that contagion is an attribute to this disease. I am aware of more than one instance in which persons left the city to escape the pestilence and went to the upper part of the State and to the North, in whom the disease became developed, and who died without infecting others who lodged in the same hotels, or the physicians and nurses who atténded them.

ARTICLE XXII.

Typhoid Fever in the State of Georgia. By T. J. WORD, M. D., of Rome, Ga. (Published by request of the Medical Society of the State of Georgia.)

In a report on the topography and diseases of the 5th Congressional district, published in Transactions of the Medical Society of the State of Georgia, April, 1853, I had occasion to consider at some length the subject of Typhoid Fever as it prevails in this section of the State. I am unable, from subsequent experience or observation, to add any views of material interest to such as were contained in that report.

I presume it was the object of the Society, to obtain a paper containing a correct account of the forms of the disease as it prevails throughout the entire State, and the comparative results of different plans of treatment. Although I have faithfully endeavored by means of circulars sent to different and remote sections of the State, to comply with the requisition, I am unable to do so with the materials at my disposal.

The number of communications received has fallen far short of what was necessary to the accomplishment of an object so much desired. To the few medical brethren, however, who have kindly responded, I feel it due to present an abstract of their communications to the Society, and shall proceed to do so in the order in which they were received. I will here add, that in this section of the State, for the last two years, the prevalence of the disease appears to be abating; cases have not occurred so frequently, nor with such severity as formerly. So far as I have been able to ascertain, *veratrum and turpentine* are the remedies generally relied upon by the profession. The former is given upon the plan of Dr. Norwood, the latter in emulsion, with gum arabic, sugar, &c. In this immediate section, these agents are much used in combination. It is not

claimed that they will cure the disease, but when used in conjunction with opium and such palliative means as the symptoms or peculiarities of each case may suggest, it is believed that the disease may be accompanied through its regular course with a successful issue in a large majority of instances. The use of the lancet is confined to the early stages of such cases as appear to be sthenic in their character. Purgatives are avoided as much as possible, being administered at long intervals and of the mildest character. Many rely exclusively upon the use of enemata to open the bowels. Blisters are generally used in the latter stages of the malady, with stimulants, fomentations, &c.

Typhoid Fever in Richmond County, Ga.—In a communication addressed me, by Prof. Dugas, of Augusta, Ga., I learn that Typhoid fever is not very prevalent there, and was, comparatively, unknown there until within the last ten years—since which time he had occasionally met with a case. It was usually a continued fever, but within the last two or three years he had seen some instances in which it was manifestly *intermittent*, the intermissions being daily, and always occurring in the evening. With regard to treatment, our informant had always found the *expectant* method the best, and very successful. He never derived any advantage from quinine, even in the intermittent cases, but did not give it in the enormous quantities advised by the British authorities. Prof. Dugas states that he has "the strongest evidence that it is *sometimes* contagious in this country," does not think that it is a local disease, confined to the intestines, nor that it should ever be designated as an exanthem as some have done. He regards the pathology proposed by Prof. Campbell, in his late report to the American Medical Association, as the most plausible he had seen.

Dr. Henry Gaither, writing from *Oxford, Geo.*, states that in his section of country, Typhoid fever is a very controlable disease, as to result, if not as to duration. His treatment is "simple, though not stereotyped." Emetics in the early stages, and blue mass as an aperient, or pills of calomel, ipecac and opium, combined, and given in divided doses, but not continued so as to induce ptyalism. He remarks, that quinine does not *cure* Typhoid fever, but is a valuable auxiliary, uniformly divesting the disease of paroxysmal complications, (due to malaria,) thereby simplifying it, and facilitating the cure. "Great benefits may be expected from the timely application of blisters to the abdomen. Neither cups, leeches, poultices or rubifacients, equal them in the relief of pain, tension and

tenderness of the bowels, and no other remedy affords such immunity from the colliquative diarrhœas often so formidable. The injuries apprehended from blisters in such cases are all ideal. Save the surface from being denuded of the cuticle by dressings of soft cerates on soft old cloths, instead of dock or beet leaves, &c., and it soon heals, and is ready for a second or third application of the epispastic, if necessary, which, however, is rarely the case. "I have often used, with the happiest effects, cold spongings, and even cold affusions, continued as long, and repeated as often as is grateful to the patient; cold acidulated and other drinks are freely allowed. But if, in a system of treatment consisting of many parts, each essential to its integrity, it can be said that one is of more vital importance than all the rest, then this is that one: *keep the patient as comfortable as possible*, and after real debility begins to appear let the treatment be as much nutritive as medicinal." Under this treatment, our informant states, nearly all recover, (certainly three per cent. do not die,) which can not be said of the heroic treatment within the scope of his observation. He subjoins that opium and its compounds are very valuable agents in the treatment of the disease.

Typhoid Fever in Monroe County, Ga.—Intelligence from this county was received from Dr. S. W. Burney, in a communication of some length. He states, that the disease was a stranger to the country previous to the winter of 1836 and the spring of 1837. He regards Typhoid fever as only a mild form of the Typhus fever of Dr. Armstrong and other English and American writers—the *Typhus mitior* of Cullen. The symptoms, according to his observation, present no "characterizing difference." The red, black and parched tongue, sometimes glazed and fissured; the constant diarrhœa, the jactitation and raging delirium, the great prostration, the frequent and *gaseous* pulse, the sordes about the teeth, and the abdominal tenderness, &c., are common to both affections. The differences of opinion amongst medical men upon this subject, he thinks attributable to the fact, that many ascribe a specific origin to cases of mere inflammation of the bowels. Of the *cause* of the disease, he remarks, that he has usually observed that whenever it prevails to any extent in a community, it appears to originate amongst those who are crowded in sleeping apartments; that it begins in houses built for many years, and in negro cabins, where a great deal of filth—as rags, chips, leather, and dirt, the sweepings of a quarter of a century, are usually found under the floor. The

symptoms of cases, occurring under his observation, were not materially unlike those described of the disease as it prevails elsewhere. A strong tendency to cerebral congestion he found of frequent occurrence; the pupils of the eyes were often dilated. At the beginning of the disease, the tongue was generally covered over its centre with a white fur, and red at the tip and edges. When the disease was prolonged beyond the ninth day, particularly if the nervous symptoms predominated, the tongue became dry and fissured, and black as raw beef. The bowels were usually tender, and attended with diarrhœa, the skin morbidly hot (calor mordax), and the pulse varying from 95 to 135 beats per minute. All the symptoms were indicative of the anemic origin and tendency of the disease. An experience of eighteen years had convinced him that the primary impression is always on the nervous tissue. In this conviction he was strengthed by the fact, that *opium*, in the form of *laudanum*, is *the best* and surest remedy in its treatment. The following is the plan of general treatment pursued: Where there is evidence of inflammation of the illeum, leech the part freely daily, and in severe cases twice a day, until there is a perceptible change in the pulse: if there is biliary derangement, give early an emetic of ipecac: if the bowels are constipated, open them daily with cold water enemas, never venturing to give even the mildest laxative, unless the enemas fail: in which event, give a dose of sulphate magnesia, dissolved in red pepper tea: if there be diarrhœa never attempt to arrest it in the early stage of the disease, unless there is evidence of exhaustion. He believes, with Drs. Graves and Stokes, that this symptom is instituted by nature to overcome the pathological condition of the bowels. He almost invariably meets this symptom with hydr. cum creta. gr. j., pulvis doveri grs. iij., given once in four hours, and persevered in, unless the bowels become too sensitive to allow the remedy. Where there is restlessness, give sixty drops tinc. opii at bed time, to an adult. This remedy is specially indicated if there is heat of scalp and other evidences of determination to the brain. "Nothing will so effectually relieve the engorged brain as the *free* use of this remedy; sixty drops are given every six hours, until the patient falls into a sweet sleep. He invariably awakes very much refreshed, with his mind perfectly restored. This, I am aware, is at variance with the directions found in books, but I have tested its virtues, and speak with confidence in its favor." Corn meal poultices are kept constantly to the bowels, and mucilaginous drinks used instead of water. Boiled

milk and gruel, coffee, &c., constitute the diet. On the accession of the asthenic or second stage of the malady, a change is demanded in the treatment, stimulants being loudly called for. Our informant regards it a matter of great importance to detect the onset of this stage, and be prepared to meet it. "If stimulants are not used within twenty-four hours after they are indicated, death is sure to end the scene." When the practitioner is satisfied of the existence of the second stage, the bowels are to be immediately locked up with enemas of laudanum, and kept thus for several days. In one instance he suffered a patient to remain twenty-one days without an evacuation. The bowels being thus confined, 2 grs. *musk* and 4 grs. *camphor*, in mucilage, are given once in two to four hours; port wine, chicken broth and beef tea are also allowed and a large blister is applied to the abdomen. The *oil of valerian* in six drop doses, once in four hours, is mentioned as a stimulant of great virtue in the disease. These, with sinapisms to the extremities, are the stimulants which an experience of eighteen years have proven the best, and are never attended with disappointment, if properly used. In cases attended with obstinate diarrhœa and which do not yield to the laudanum enemas, indicating ulceration of the glands of Peyer and Bruner, *spirits of turpentine* is advised. Dr. Burney claims to be the first man who used this article in the latter stages of Typhoid fever. He claims also great success in the use of nitrate of silver and alum in similar conditions of the intestines. In one case of ulcerated bowels, he gave the chloride of soda with success, after the failure of other remedies. In cases where there is an abiding appetite for a particular article of food or drink, the practice of our informant is to indulge it. He mentions a case in which a patient begged several days for brown sugar; it was allowed him in large quantities, and seemed much to promote his recovery. *Quinine*, he regards injurious in this affection and in all cases attended with inflammation of the bowels. He observes, in concluding his communication, "that every thing depends upon the prompt use of stimulants at the right time, The success attending my plan has been highly flattering, so much so, as to deprive the disease of all its terrors; I have no idea I have lost more than one case in seventy-five. This, I admit, may look like boasting, but an appeal to those who know me, will bear me out in the assertion. Others, who agree with me, have had signal success in overcoming this scourge, whilst those who persist in purging, puking, &c., lose a very large per cent. of their cases."

Typhoid Fever in Athens, Ga.—Dr. W. L. Jones, in a communication from Madison, Ga., informs me, that having lived in that vicinity but a short time, he can give no account of Typhoid fever as it prevails there, but was familiar with it as it occurred in Athens, where he formerly resided, having been himself attacked with the disease in 1849. So far as he had observed, it generally attacked persons in good health during midsummer. Its duration varied from three to six or more weeks. It began sometimes with catarrhal symptoms, oftener with derangement of the alimentary canal, the latter always supporting the former after a few days. The treatment was cupping over the abdomen, when there were symptoms of congestion in the early stages, with opiates and small doses of blue pill at intervals. He was of the opinion that no treatment had had any decided influence on the disease. Palliation of some unpleasant symptoms, and administering to the comfort of patients being the chief results attained. He knew of no disease where the treatment is more wholly confined to *symptoms*. Reference is here made to the *continued fever* per se, and not to various other diseases which sometimes assumed a lingering typhoid form.

Typhoid fever in Walker County, Ga.—I am indebted to Dr. A. L. Barry for information from this county. He "regards Typhoid fever as *continued* in its character, but capable of assuming a malignant *typhus* state. The red, fiery tongue of the Typhoid of the present day, and the great tendency to inflammation of the glands and mucous surfaces of the bowels, may appear different from the continued and Typhus fevers of Good and others of his day; but those of us who have been in actual service for twenty years will give but one opinion, and that is, that *Typhoid fever* is only a modification of Typhus. Between 1835 and 1848, *Typhus mitior* prevailed in all this region of country during the winter season. It differed but little from that form as described in the authorities, and was styled winter fever. Since 1845 there has been a gradual modification in the malady until the present time." Our informant remarks of the treatment: that coming from a malarious district to the upper region of Georgia, he at first made free use of *quinine, calomel and Dover's powder*. The first he was forced to abandon, not only as useless, but positively injurious. He afterwards resorted to the free use of cold water, in the form of bath, wet sheet, &c., using the lancet occasionally, in conjunction with mild cathartics and sudorifics. The success of this plan was gratifying, but as time advanced the malady presented other modifications more difficult

to overcome. Amonst these was the red, dry tongue produced by the mildest cathartics, the diarrhœa which in many cases was attended with bilious discharges, and tympanitis with floculent dejections, &c. His present plan of treatment is as follows: "When called early in the forming stage of the fever, the pulse quick, the tongue more slimy than furred, with red edges, or perhaps a red centre, and the skin dry and hot, I prescribe cold baths Dover's powder and mustard pediluvium at night. At morning give a small dose of oil and turpentine. 2nd. If there is any tenderness of the bowels, mustard poultices to be applied; Dover's powder in small doses every three or four hours; cold bath if skin is hot, repeated several times in twenty-four hours. The bowels may be opened with an enema. 3d. ℞. Tinc. Opii, spts. nitr. dulc., bals. copaiv., tinc. digitalis, *aa.* ℥j; aqua, ℥jss. Misce. and give to an adult, a teaspoonful once in four or five hours. When not objectionable to the stomach, a drachm of turpentine is added to the mixture. The pediluvium to be continued at bed time with friction over the body." The following case he submits, the better to illustrate his plan of treating the disease.

Jan. 28th. Saw, in consultation, Miss M. H., aged seventeen, and attended the case. Was taken sixteen days ago—pulse 135; tongue and fauces very dry and red; sordes on the teeth; abdomen tender and tympanitic; urine scanty and high coloured, and patient disposed all the time to coma; speaks when aroused and mutters a good deal, especially at night. Prescription: Take of the balsamic mixture above given, a teaspoonful once in every four hours. At night, give 3 grs. Dover's powder and repeat if the bowels (already too loose) should be moved; also, let her be washed with number six or brandy. 2nd visit—Patient rested better through the night; bowels quiet; some increase in the quantity of urine. Continue the mixture with elm tea and brandy in small quantities. 3d visit—Pulse less frequent, but in other respects not much difference. Continue the mixture with fomentations to the bowels; if they remain quiet, give teaspoonful each of castor oil and turpentine at 4 o'clock; blister the neck and use frictions over the skin at night with brandy, &c., morphine to be given if purgative acts too strongly. 4th visit—Medicine had acted, causing bloody discharges, which were suppressed by the morphine. Pres. Add 2 grs. acetate plumbi to each dose of the mixture, and give only two doses with an interval of six hours. 5th visit—Pulse at 115; bowels quiet, urine copious: patient takes a little broth frequently. Continue mixture, as before.

6th visit—In *statu quo.* 7th visit—Rather better; has more relish for food. 8th and 9th visits—Patient in much the same condition. An enema ordered. 10th visit—Has been an action of the bowels, the first since the bloody discharges. No material alteration in the treatment until the fourteenth visit, when a dose of oil and turpentine was given, which was followed by moderate purgation, the discharges being more consistent and improved. Continue the mixture through the day and give at night and morning a powder composed of 2 grs. each of hydr. cum. creta and Dover's powder. This prescription was followed four days, after which she took only one of the powders and the mixture three times per day until discharged. In this plan it will be perceived that I endeavor to fulfil two leading indications, to quiet the bowels, and arouse the renal system. Whenever the *cider* stools appear, I invariably check the bowels for several days, at the same time using the balsamic mixture, conjoined with fomentations to the bowels and frictions over the body." Dr. B. objects to the use of blisters to the bowels, but blisters to the neck are used when the head is likely to suffer. When the mixture above mentioned was not tolerated by the stomach, he substituted a combination of *camphor, digitalis, opium and ipecac.* He states that he has used the lancet with advantage in athletic patients in the early stages of the malady.

Typhoid Fever in Cobb County, Ga.—My informant from this county, is Dr. W. N. King, of Roswell, who writes that Typhoid fever in its true form, that is, according to Louis, Chomel, Andral, Petit, and others, prevailed there for the first time in 1848, and proved very fatal; since which time it has continued, but not in an epidemic form, until the last fall, when it assumed the *remittent type* chiefly. There were occasionally observed cases of a continued and also *intermittent* character. He remarks that "Dr. H. R. Casey, in his excellent paper read before the State Medical Society, 1852, mentioned the above peculiarities and reported a number of cases in the December number of the Southern Medical and Surgical Journal, 1851." Dr. King states that at first, his treatment was varied and as unsuccessful as varied. Antimonials and mercurials combined and alone, were tried, and gradually the whole list of febrifuge articles in the materia medica, but without success, until sickened and disgusted, he abandoned all hope of ever effecting anything in the treatment, in which connection he truly remarks "that numbers of others in the profession have passed through much the same ordeal with this "*opprobrium medicorum.*'"

To Dr. Norwood, he concedes a debt of gratitude for the introduction of his tinc. *veratrum viride.* "Armed with this, we can say to the fever 'thus far shalt thou go.' In it we have the controling agent of Typhoid fever—that which has been so long sought after, *the real true arterial sedative.* "I have not arrived hastily at this conclusion, but mine has been accumulative experience." In his first trial with it, he states that he began with some misgivings. Believing, with Dr. Casey, the disease to be one of the most prostrating of our fevers, attended with great nervous depression, &c., and the *veratrum* having the power *per se*, of producing in the human economy these same demonstrations, being certainly one of the most depressing agents in the materia medica, he was unwilling to superinduce upon a pre-existing debility the increased prostration consequent upon the administration of this powerful remedy. This he remarks, appears to be true in theory. "But, had the Dr. experimented and tested its virtues before publicly banishing it, and pronouncing his anathemas, he would have been advancing the cause, on a subject which most loudly calls for scientific investigation, and also rendering to Dr. Norwood that which is justly his due. Is not the fever the cause of all this nervous depression?—remove the cause and our end is accomplished. This low nervous state passes away, the pulse comes up round and full; and by the continued and judicious use of the veratrum, is held at sixty, seventy-five or eighty beats per minute; the appetite returns, and the patient passes through the course of the fever unharmed.

Dr. King contends that Typhoid fever, like the exanthematous diseases, has its peculiar phases to pass through, and can no more be stopped than *Small pox* or *Rubeola;* but thinks, with the use of such an agent as we possess in the veratrum, we can control the fever and thus husband the strength and save the patient. In two or three cases, he had "continued the use of the veratrum from sixty to seventy days, without intermission, save a few hours, to see if the fever had run its course; when the pulse would *rise*, the *tongue* become brown and *hard*, and all the symptoms attendant before the use of the veratrum, become speedily manifest. Upon resuming it, all these symptoms would vanish, like mists before the morning sun, clearly demonstrating the virtues of this most valuable agent." He states that his success in the use of the remedy has been most flattering. In some cases, where he found a tendency to diarrhœa, he used opium for its astringent effects, and where, on the contrary, there was constipation, a little blue mass, followed by castor oil was

given, in the meantime continuing the veratrum; great care being taken to avoid all purgation of a drastic nature. He states, his experience in the use of the veratrum, to have been as follows:

1st. I have never found it to increase the action of the bowels, even where there was a predisposition to it; its specific action being an *arterial sedative*, just what is wanted in Typhoid fever.

2d. In a few cases, I have found the *volume* of the pulse at first reduced, but its *frequency* not affected; but, by its continued and careful use, the pulse has been brought down *under control* both in volume and frequency.

3d. I have seen it produce *hiccough* of a most distressing nature, and had to suspend its use from twelve to twenty-four hours; but, by again resuming it in *very dilute* doses, and at long intervals, its physiological effects were produced without any untoward circumstances.

4th. In some cases, the susceptibility was so great, that *two drops* occasioned emesis and prostration; but I never have seen a case where, from idiosyncrosy, the veratrum was entirely inadmissable, but with *caution* and *perseverance*, the system can be *brought* under its influence, and kept under it for any length of time during the course of an attack of fever.

My mode of administration is as follows: Make a solution of 30 drops veratrum viride to ℥j. water and give of this, *one teaspoonful* every two and a half, three, four or five hours, beginning at the longest interval first and gradually decrease the space of time between each dose, until the patient is brought under its effects—taking great care not to give it too rapidly at first, watching closely its physiological action; after that, continue as necessary, never permitting the patient to lose entirely its effects during the whole course of the fever. Diet nutritious, but not exciting; soft boiled eggs; gelatine with or without wine; chicken soup, common starch, &c.

"I am aware that pathological researches, in most diseases, throw a flood of light upon treatment; but what, may I ask, has pathology done for the treatment of Tpphoid fevers? So I say less of pathology and more of treatment, this is what we want."

In concluding, Dr. K. urges the claims of the veratrum upon the profession in the following words, "It is our *only hope of success* and must work an entire revolution in the treatment. Let each one for himself test its virtues and report cases: the result *will* be a reduction in the bill of mortality more than one half."

ARTICLE XXIII.

LETTERS FROM SAML. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY.

LETTER NO. 3.

MONTGOMERY, ALA., June 15th, 1855.

Messrs. Editors—In order to preserve a proper connection, and prevent any misunderstanding of my views upon the subject of Congestion, I find it necessary to recapitulate some of the leading points of the discussion, and I feel disposed to lay more stress upon those points for the reason that there appears to be, not only a want of argument in the profession relative to the use of the term proper to express the condition, but there has existed a contrariety of opinion with regard to the nature of the condition itself, and what appears a little strange, is that writers upon this subject have invariably coupled it with *intermittent* or, *remittent fevers*, or as some have maintained and *laboured* to prove, the sui-generic existence of such fevers, and the profession at large, have scarcely, yet learned to consider it in any other light, or connection.

Dr. Wood, who stands among the foremost of those writers, objects to the use of the term Congestion, upon the ground of difficulties which, I think, he himself has created, by the subdivision of Congestion into "*active* and *passive*," for, in assigning his reasons for adopting the term "*pernicious*" he says, "the term *Congestive* is still more exceptionable (than Malignant) because, besides *belonging to a vast number of other affections of all possible degrees and of wholly distinct characters, as for example, to cases of arterial or active*, as well as *venous* or *passive Congestion*, it is moreover calculated to lead into erroneous views of the nature of the disease." Now, this position is not tenable; for, in medical parlance, *no* disease has received the appellative term Congestion, having the characteristic condition of what Dr. Wood calls "Active Congestion," nor is the idea ever associated in the minds of those who understand the subject with—"affections of all possible degrees, and of wholly distinct characters," for Dr. Wood, himself, who understands precisely and perfectly well what Congestion is, in treating of "pernicious fever," the synonyme of "Congestive" never looses sight of the true pathological condition of nervous depression, or *deficient innervation* which he most sedulously urges upon our attention, and says emphatically, "*it is confessedly Venous Congestion that is present in these cases.*" And, again, as if summing up all his arguments upon this point, he

says, "it appears then that this defect or derangement of innervation lies at the basis of *all* the morbid phenomena of the organic functions, the congestion necessarily follows the prostration of the active circulating forces, the pulmonary capillaries; the heart, and the systemic capillaries *are all enfeebled,* the blood therefore *collects* in the *veins,* and in the great internal organs, especially in those connected with the portal circulation." Now, if Dr. Wood and others choose to hold to the term "pernicious" to express a *particular* modification of a *particular* fever, I have no reason to object; but for my part, I have a more extensive use for the term Congestive; and notwithstanding the weight of authority to the contrary, I must insist that it is the preferable term to express the condition. I have maintained that this condition, which constitutes one of the first links in the chain of morbid phenomena of almost all febrile affections, often exists as a permanent one, manifesting signs of its existance to a greater or less extent throughout their paroxyms, and sometimes to such a degree as to obliterate all traces of their true typical character. I have endeavored to show that this condition is the result of the operation of such causes as tend directly or indirectly to diminish nervous power, or impair the tone and vigour of the system, prominent and foremost among which, stands atmospheric heat, which, besides its influence upon the general system, exerts a decided and powerful influence or control over the functions of the liver, laying a foundation for, and giving rise to numerous troublesome and often dangerous complications; and that the frequent occurrence of this condition, in connection with our febrile diseases of *all descriptions,* together with these complications, renders a knowledge of their true nature and character, of the utmost importance, in a theraputic point of view, to every Southern practitioner. And, having endeavored to show in what the condition consists, that it is uniformly the same in its essential nature, in whatever light or connection it may be found to exist, and that it differs only in *degree,* according to the intensity or permanency of the causes which operate singly or conjointly to produce it, I shall proceed to make a classification of these *degrees* (for practical purposes) according to the *existing conditions* of the system, which I have before suggested, namely: To all cases of fever, *whether idiopathic* or *symptomatic,* in which the depression and congestion are so complete and permanent as to obscure or obliterate the signs by which the type of the fever would otherwise be recognised, I would apply the term "*Congestive,*" without qualification. To those cases in which the signs of

depression and congestion are persistent throughout the paroxysm, but not so complete as to obliterate their typical character, I would apply the term "*Congesto-inflammatory*" or "*Congesto-irritant*," as the signs of excitement *present* might indicate a diathesis favouring one, or the other, which must necessarily be determined by the judgment of the practitioner; and very nice discriminations are often necessary to be made, as in these modifications of fevers, during their exacerbations, the excitement sometimes rises so high in its *general aspect*, as to render a correct diagnosis of those conditions difficult, even to the most experienced, and however near these conditions may assimilate in appearance, a correct practice and favorable results, must depend upon the issue of the judgment.

The terms "*inflammatory*" and "irritant" (which, though belonging to the same classification, do not properly belong to our present subject) apply to those conditions in which the excitement ranges above the line of healthy excitement, during the period allotted to the paroxysm, according to the type of the disease to which they belong. Now, I will not quarrel with those who do not choose to recognise the term, or adapt the classification, which is here presented; but this much I will say, that by adopting this classification, I have found my practice, in such cases, very much simplified, my labours and anxiety abridged, and my confidence and success increased.

It remains, now, for me to give an outline of the signs and general symptoms by which these modifications or classes may be known in order that others may be enabled to apply them to individual cases; and, for this purpose, I will take Pneumonia, for the reason that it is an affection of general prevalence, that in the light of a *local affection*, so far as the inflammation in the lungs is concerned, the shades of difference are slight, (if any,) whatever may be the condition of the general system, when brought under its influence. That this condition of the general system, whatever it may be, if divested of the peculiar phenomena which belong to and distinguish the local inflammation, as such, would stand in a similar, if not identical relation in all its phenomena with our ordinary malarial idiopathic fevers, and that it presents all the forms, grades and modifications of those fevers, from the highest degrees of excitement and inflammation, to the lowest depths of congestion and collapse. I wish it to be borne in mind, that if my description of these affections should appear meagre and incomplete, it is for the reason that they are used merely for illustration of the subject in hand

and are not intended to be represented in their full and complete livery.

We will suppose, then, that cold and wet, a sudden transition of temperature, or some other cause has operated to kindle up an irritation in the lungs, or in some part thereof, and some circumstance occurring to increase the action of the heart and arteries, a current of blood will be determined to that point, which will accumulate in the capillaries and arterial ramifications, still further increasing the irritation and the determination in that direction, until it rises into inflammation. This action being seated in the nerves and capillaries of the bronchial artery, and parenchymatous structure of the lungs, constitutes Pneumonia. If there should exist no concurrent circumstances to produce a state of general depression and congestion, the blood of the general circulation will flow through the Capillaries of the pulmonary artery with an acceleration proportioned to the general excitement, except at the point of inflammation; where it will be met by the previously *engorged* capillaries, when these vessels will become involved in the general results of the inflammation, giving rise to *Congestion* in the pulmonary artery, proportioned to the extent of the inflammation.

I have been thus particular in fixing the precise seat of the disease, in order to show that the *Congestion* thus produced, (and which is a necessary attendant upon the disease, whatever character the general symptoms may assume,) is altogether different from *true congestion* of the lungs the former being, as it were, *mechanical* and the offspring of *excitement*, and the latter, *pathological*, the offspring of *depression*, one being local, the other general, with respect to the lungs. The same remarks will apply to the condition of the liver, and the portal circulation, as in certain affections, where there is a high state of general nervous and muscular excitement, in which that organ participates as in some forms of bilious or remittent fever, the portal system of veins is often congested, and throwing the blood back upon the venous radicles, and thus obstructing the free circulation of the blood in the arterial capillaries, gives rise to irritation or inflammation in the organs, whence the blood of the portal system is derived. But the congestion thus produced, although the results may be nearly the same, does not belong to, or constitute any part of the condition which we are discussing, but must be viewed in the light of a local affection merely; so when we speak of congestion of the liver, or the lungs, or the brain, it expresses the condition of the organ merely, and not the condition of the general

system, which I have before said, may be in either a state of exalted excitement, or of depression. I may remark, however, with respect to the *brain*, that it can *never* be in a state of *congestion*, on account of the *pre-existence* of inflammation in that organ, being dependent for that condition upon congestion of the heart or lungs, as congestion of the stomach, intestines and other abdominal viscera, is dependent upon congestion of the liver. But it can readily be perceived, how an *inflammation* can be kindled up in that organ from a persistant congestion of the heart, or lungs; or in the abdominal viscera, from congestion of the portal system. Attention to this view of the subject will enable us to understand why it is, that all our diseases are so mixed up with dangerous or troublesome complications, especially if we will keep in view the fact, that they depend upon antecedent, or predisposing causes, such as I have shown the influence of atmospheric heat to be. Hence, in Northern latitudes, where no such antecedents or predispositions exist, or but to a limited extent, an attack of Pneumonia will generally run its course without any material modification of the ordinary inflammatory form of the disease, and without complications, or, if any should occur, such as congestion of the brain, liver, &c., they will be referrible to the inflammation for their cause, *and will be curable by the same means.* Not so, however, with us; for it often happens, that the original affection becomes a matter of secondary consideration, and of minor importance, compared with the complications, having for their origin a condition of general nervous depression, and requiring altogether a different mode of treatment. This view of the subject, too, will enable us better to understand and appreciate the distinction or classification which I have made, of the degrees of congestion.

Well, having fixed the seat of the inflammation, and assuming that the exciting causes, as well as the seat of inflammation are the same in all cases, without regard to the condition of the general system, if there should exist no concurrent circumstances to produce depression and congestion, but circumstances which have before been mentioned should favour, or predispose to the existence of the inflammatory diathesis, when the general system is brought under the influence of the local inflammation, the general excitement will be kept up, subject, however to the influence of exacerbations and remissions, according to the type which the fever may assume, until the *vigour* of the system is reduced, and the excitement and inflammation is subdued. Under such circumstances, in addition

to the symptoms, which may be considered *characteristic* of the *local* affection, as *pain, cough* and *difficult breathing*, (which indeed can hardly be regarded as such, there being many cases of Pneumonia in which neither are present) and such signs as may be ascertained by percussion and auscultation, the disease will be made up of such symptoms as characterise diseases of excitement, generally, such as a hot dry skin, and flushed face, a full, strong or hard pulse, often pain in the head, the tongue usually dry and furred, sometimes nausea, generally constipation, and an interruption or suspension of the secretions generally. These symptoms being always increased in violence whenever the investment of the lungs may chance to be involved in the inflammation. I have presented this form of the disease, not because it falls legitimately within the range of our subject, but because it represents (though imperfectly) the disease in what may be regarded its *elementary*, or true *inflammatory* character, and will serve to show (by contrast) in stronger light the symptoms which belong to the disease in its *congestive* form. Premising, then, that causes have operated to produce a state of general nervous debility, and especially of the organic nervous system which will to some extent, modify the characteristic symptoms of the disease. The pain in the chest will generally be found to be dull and obscure, the cough inconsiderable, and usually attended with expectoration of brown, bloody or frothy egg-nog looking sputa; the respiration, generally, slow and frequently interrupted with heavy sighs, and often rattling in the air passages. The voice feeble and husky; the countenance pale and sometimes livid and ghastly, and the features appear sharpened or shrunken; the skin preternaturally cool or cold and clammy, with sometimes profuse sweats, and the extremities cold and shrivelled; the tongue cold, broad and thick, and covered with a thick moist yellow, cream or ash-coloured fur. Often, a sense of great oppression and distress about the epigastric region; frequently nausea and vomiting, and a strong tendency to diarrhœa. The head generally free from pain, and the intellect generally clear, and the pulse small, feeble, generally frequent, irregular or indistinct. An analysis of the symptoms which characterise these two opposite conditions, would claim our attention, but I prefer to include those which belong to the minor or sub-divisions, which, though having no separate or independent origin, are nevertheless important in a practical point of view. I should observe, that these descriptions are intended to represent each class, or modification, in its full development, or at the highest point of the

exacerbation, and subject, as in all cases, to such changes as belong to their periodic character. The first of these which I shall describe, is the "congesto-inflammatory" form. In cases of this class the characteristic or local symptoms are variable, the pain is often obscure and sometimes severe, especially if the pleura is involved, which is not unfrequently the case. The cough is sometimes severe, but most commonly it is inconsiderable, and attended with expectoration more or less abundant of yellowish brown, or bloody mucus, the respiration variable, sometimes slow, laborious and even stertorous, at others hurried, and at times again almost natural. The countenance, usually, is pale or sallow, with a sad or melancholy expression. The body and the head are usually hot, and the extremities preternaturally cool and the skin moist. The tongue generally looks *enlarged*, is sometimes dry, but generally moist and covered to a greater or less extent with a long white, yellowish or cream coloured fur, thicker and darker coloured towards the root and centre, and thinner or even wanting at the edges. Usually there is epigastric oppression and distress, and sometimes nausea and vomiting. The bowels sometimes constipated, but often there is a strong tendency to diarrhœa. The head is usually affected, sometimes with pain, frequently dulness or confusion of intellect, and sometimes stupor, and the pulse, which is sometimes slow, is generally frequent, sometimes *full* and *bounding*, but *soft* and *compressible*. The "congesto-irritant" form, which is the last in the order of our classification, is usually characterized by more acute pain in the chest, with frequent and troublesome cough, with more or less expectoration and hurried respiration. The face usually pale, but sometimes flushed; the skin hot, and often bathed in perspiration, which fails to reduce the heat. There is often pain in the head and cerebral excitement, tending to delirium and convulsions; the tongue is usually coated with a white or yellowish fur; nausea and vomiting of watery or thin bilious matter is common, and often diarrhœa; the thirst is often urgent; there is usually a state of gene restlessness, and the pulse is usually *soft*, *feeble* and *compressible*, and *always frequent*.

There is yet another form of the disease, which, although it is frequently attended with local congestion, and in some instances there are striking similarities in the conditions, (I mean the typhoid) yet if they be traced to their origin, or carried to their termination, the differences will not be less manifest in the evidences of *functional disorder* in one, than in structural derangement in the other. This

condition (typhoid) will, perhaps, receive from us hereafter, a separate consideration.

With regard to the inflammatory condition, which is generally so well understood, it is only necessary to say, that in affections of this sort the excitement usually extends itself to *all parts* of the nervous system in a greater or less degree, and the symptoms which distinguished it and the danger attendant upon it, are always determined by its location, intensity and duration, and as a *local* affection, is characterized by heat, pain, redness and swelling, and as a *general condition*, by a *hot, dry skin, a full strong pulse*, and an interruption or suspension of the secretions.

In congestion, the depression is confined chiefly to the organic nerves, in which the cerebral or animal nerves may participate to *some* extent, from the influence of the depressing cause; but, in general, the depression which exists in those nerves, results from the *withdrawal of the stimulus of arterial blood.* In this condition, as in inflammation, local congestion has its characteristic signs, as great restlessness, distress and sense of oppression, when the liver or vena portarum is congested, laboured respiration, when the lungs, and stupor, when the brain is congested, and the general condition is characterised by *coldness and flaccidity of the skin*, and *feebleness* of the *pulse.*

Having pointed out the most ostensive signs by which these opposite pathological conditions may be recognized, it becomes necessary to inquire into the manner of their production, and the relation which they sustain towards these conditions, as cause and effect. I have stated that it would be an almost endless task to attempt an investigation into the nature of all the causes which tend, directly, or indirectly, to produce excitement and depression; and it will be sufficient for our present purposes to say, that these causes, whatever may be their nature and mode of action, do not operate upon all the organs, systems, and tissues at the same time and in the same manner, but operate with unequal degrees of force, and that all diseases are made up of a regular series of cause and effect, and all under the controlling influences which determine the general conditions of excitement or depression. Although the brain, as the great centre and source of nervous power, presides over all the other organs and systems, they are not all directly dependant upon that organ for the performance of their respective offices and functions, such is the case with those organs which derive power from the ganglea of the great sympathetic; hence, disordered function in one,

does not necessarily imply disorder in another. The excitability of one may be increased or diminished without the other; one may be exalted in excitement, while the other is depressed; or both may be exalted or both depressed. I have already endeavored to show the influence which climate, with respect to *heat* and *cold*, exercises upon these different portions of the nervous system, in the establishment of a *general predisposition*, as well as the production of particular diseases and complications; and as this matter cannot be too strongly impressed upon the attention, I will repeat that, while *cold* tends to give *vigour* or *strength* to the nerves which support organic life, *atmospheric heat* tends to diminish it, and induce in them a state of debility. This single proposition will serve to explain why it is, that in northern climates, diseases often run through a long course of high febrile excitement, while in southern latitudes, high febrile action is comparatively of short duration and of rare occurrence, and the organic powers are first to yield to the influence of depressing causes. If climate alone is sufficient to create these distinctions, there are other causes which operate to make them still more evident, and produce the modification which I have noticed under the different forms of pneumonia. These are embraced in the changes of seasons, atmospheric vicissitudes, character of soil, location, habits of life, and a thousand other things which operate with more or less force to depress nervous energy, the chief of all of which may be reckoned, malaria. Both heat and cold acquire additional force in their action upon the system, by the addition of moisture, which is also regarded as an essential agent in the production of malaria, and the nature of our climate and soil furnishing abundant material for its production, as heat, moisture, and vegetable matter, it may well be regarded as one of the most common and prolific sources of disease. It is not indispensable to our present purpose to determine in what manner this morbific agent is introduced into the system, being sufficient to admit, that in whatever manner it is introduced, or on whatever system or tissue it makes the first impression, its most evident and manifest effects are to *depress* the powers of the *organic* nervous system.

Another common source of depression is to be found in the progress of diseases of regular exacerbations and remissions, in which, in each successive paroxysm, the system sustains the loss of a portion of its aggregate nervous power, which, progressing to a certain extent, the depression and congestion become permanent and complete. The progress in the formation of the condition, may be

observed in almost all our pyrexial diseases, whether of winter or summer, but is perhaps more observable in our autumnal intermittent and remittent fevers; in which, in each successive paroxysm, the cold, or congestive stage, becomes more protracted, and the hot or febrile stage less so, until finally all effort at re-action becomes lost in a state of general depression and congestion. This result may at any time be accelerated by certain therapeutic agents in unskilful hands, such as the lancet, drastic and hydragogue cathartics, and other sedative remedies, used with the *view of subduing excitement*, which, under the most favorable circumstances, is often not more than sufficient to sustain the system and defend the vital functions against the consequences of a general depression and congestion. And, I will say, in all sincerity, that with the exception of such cases as were indebted for their origin and existence to some powerful epidemic influence, I have never met with a case unqualifiedly "congestive," which was not the result of such mismanagement. But of all the causes which operate to produce depression and congestion, there are none which operate with the force and rapidity of those which produce epidemic or Asiatic cholera, which disease, furnishes the most perfect specimens of *congestion.*

Thus far, I have considered the subject in reference to the condition of the nervous system only, but it is proper that I should enquire also, into the part which the *blood* sustains in relation to the condition, as well to the constitution of the blood itself, as to its unequal distribution. It is generally admitted, I believe, that there are particular conditions, or constitutions of the blood, connected with diseases of inflammation, congestion and irritation; but in what relation, whether of cause or effect, remains to be determined. That in inflammatory affection, the blood contains an excess of fibrin; in congestion, both fibrin and albumen are deficient, and that in irritation, the fibrin is deficient and the red corpuscles are in excess. I have cited these conditions of the blood to show, that whether they are the cause or the effect of the particular morbid condition of the system to which they belong, they constitute sufficient grounds, physiological as well as pathological, for the classification which I have made of these disorders, and the presumption is reasonable, that they exert an influence, both in producing and maintaining these conditions. There is no doubt that oft repeated, or long continued accumulations of blood in the venous cavities, and the slow and imperfect elimination of its natural impurities, it becomes in a great measure, unfit for the performance of

the many important offices and functions in which it is employed, not the least of which is to sustain the energy, and impart life and activity to the whole nervous system, and failing in this, give rise to other and greater accumulations. If such changes are wrought upon the condition of the blood in consequence of its accumulation and detention in the venous cavities from *depression*, still greater and more important consequences follow its accumulation and long detention in the arterial and capillary system from *excitement*, which tends, not only to depravity of the blood from interruption of the functions of secretion and depuration, but by a species of *internal combustion*, to a destruction of the *vital solids*, also. Under such circumstances, life will become extinct (as it were) from the rapidity or the intensity of the combustion, and the destruction of essential parts of the aparatus employed in the process. While, from accumulations in the venous cavities, life often becomes extinct, from sheer *inanition* and *enervation*, as a lamp will go out for the want of oil, or oxygen to support combustion. And it is often the case in pneumonia and other inflammatory affections, that death occurs when there are no evidences of a sufficient amount of inflammation to produce such a result. The effects of these unequal distributions and accumulations of blood, will be further noticed in connexion with the action of the heart, and the examination of the symptoms which I have described, as belonging to these separate conditions, which will compose the substance of my next letter.

I hope you will not consider me too prolix, as it is my desire to be as concise and comprehensive as the nature and importance of the subject will permit, and trusting to your patience to hear me through, I subscribe,

Your ob't ser'vt.

SAM'L. D. HOLT.

ARTICLE XXIV.

Vesico-vaginal Fistula, with laceration of the anterior lip of the Cervix Uteri, of nearly six years standing—cured in two weeks. By N. BOZEMAN, M. D. (Report read before the Sydenham Medical Society, of Montgomery, Alabama.)

The subject of this case was very kindly sent to my Infirmary, for treatment, by Dr. W. J. Mitchell, of Tuskegee.

Delphia, (colored woman,) belonging to Dr. Robert Howard, of Macon county, was admitted on the 4th of April, æt. 25; stout, well formed, and has the appearance of one enjoying good health; always

menstruated regularly, &c. In August, 1849, she gave birth to her second and last child; has had no control over her urine since; was in labour nearly four days; delivery natural; child of medium size, strong and vigorous; did well, and is at present a large and healthy boy. Presentation was vertex, so far as can be ascertained. First labour, about a year before, lasted four days—the child was still-born, and of large size; delivery natural, recovery speedy, &c. In neither confinement was the patient attended by a physician.

Upon examination, I found the vagina to be very capacious—a circumstance of no little importance, as regards success, in any case, but especially is it so when the fistulous opening is found in close proximity to the cervix uteri. The injury sustained by the parts, seemed, at first view, to be very extensive; but upon further inspection, they presented a more favorable appearance. In the anterior lip of the cervix, was to be seen a deep cleft, presenting on either side, a considerable prominence; at its anterior extremity, was situated the fistula, oval in shape, and large enough to admit the index finger into the bladder. No effort seemed to have been made by nature to repair the cervical injury. In a case,* almost identical, which came under my observation last year, a spontaneous cure was found to be perfect—union seeming to have taken place by the first intention,—only the line of cicatrization remained, showing very plainly the extent of the injury, and its relation to the fistulous opening.

This difference in the results of nature to repair injuries, presenting the same characters—influenced by the same causes, is of no practical importance in the present instance, yet it is a fact none the less interesting.

As to the operation, two modes of procedure very naturally suggested themselves: one, was to close the fistula and afterwards the cleft—the other, was to complete the whole under one operation. The latter, though more difficult of execution, was the one I adopted, for the reason that the patient would not require to be confined so long.

A reparation of the cervix, I did not consider essential to the success of curing the fistula; still I determined to effect it, if possible, in view of the probable results of parturition, should it occur again. With such a deep fissure existing in the anterior lip of the cervix, it can very readily be perceived, how much more liable this point would be to give way under powerful uterine contractions, attended

* New Orleens Med. and Surg. Jour. May No., 1854.

by a reproduction of the fistula, and perhaps laceration of the uterus itself, with all their dreadful consequences, as dribbling of the urine, metritis, peritonitis, &c.

On the eighth day after admission, assisted by Dr. Clanton and Mr. Duncan, a medical student, I proceeded to operate. The method employed, was that of Dr. J. Marion Sims, (who, be it to the honor of America—yea, of the world, has accomplished more in this hitherto difficult branch of practice than any surgeon living.)

A detailed account of the different steps of the operation, I shall purposely omit, as it would be tedious, and perhaps uninteresting; therefore, only a single feature of it will be presented—the application of the suture apparatus. From my description of the injury, it will now be seen that the clamps had to be applied, with all the accuracy observed under ordinary circumstances, to parts totally different in structure and function, with the view of obtaining, by a natural and common process, a natural and common result—union by the first intention.

The dense, strong and unyielding tissuse of the cervix, had to be made to harmonize with the erectile spongy and elastic tissue of the vagina. In lodging the wire sutures in their respective places, great care had to be taken that the needle was entered and brought out at a distance from the fistula and cleft, corresponding to the extent of elasticity or adaptation of the parts. If too far removed, there was danger of the edges becoming everted, and *vice versa.* In neither instance, could perfect coaptation be effected—a desideratum indispensable to success. The difficulties and perplexities of such a task, simple as its execution may appear, can scarcely be realized by one who has never attempted it. Having, then, thoroughly freshened and shaped the edges of the injured parts, the first suture was carried through the cervix in its lower third; the second was entered on a line a little exterior to the first—carried across the upper extremity of the fistula, and out at a corresponding point on the opposite side; the other two were entered in a similar manner, at equal distances below. To the ends of the sutures, on the right side, a clamp was fixed, and made to take its proper place—the upper end resting against the side of the cervix. The one on the opposite side was arranged in a similar manner, with the proximal ends of the sutures passing through it. Traction being now made upon these ends, the edges of both fistula and cleft were brought in direct apposition. In this relation, they were maintained by compressing a small shot on each suture, close to the clamp; after which

the sutures were cut off close to the shot, and the patient put to bed. The self-retaining catheter was next introduced into the bladder, and the operation then completed.

On the day following, menstruation came on, and soon afterwards I noticed a bloody state of the urine, and slight leakage of the bladder. This condition of things continued four or five days, or until the catamenia ceased, when all unfavorable indications disappeared, and the patient seemed to do well. That a small opening in the bladder existed during this period, to allow of leakage and commingling of the two fluids, there can be no doubt. The most remarkable thing about it, is, that it should have closed after so long a time.

The explanation of the result, I think, is this:—A small groove remained at the bottom of the cervical cleft, after the application of the clamps, thus admitting a portion of the catamenia to pass along to the upper extremity of the fistula, when it entered the bladder. Owing to the peculiar situation of the opening, and its valve-like form, only a very slight leakage could take place, and this, I imagine, as a result of some effort or change of position on the part of the patient. The urine, then, having little or no tendency to escape here, and the edges of the opening being still in a freshened state, union of the parts followed immediately upon the cessation of the catamenial flow.

On the fifteenth day of the operation, I removed the clamps, when union at all points seemed to be perfect. A small notch at the extremity of the anterior lip of the cervix, was the only evidence of the deep cleft which had existed there. The patient was now allowed to get up. At first, she could not retain her urine longer than two or three hours, without experiencing some pain in the region of the bladder. This difficulty, however, gradually diminished as the organ regained its natural tone, which it did in a few days.

Montgomery, May 10th, 1855.

On the treatment of Mammary Inflammation and Abscess. By O. C. Gibbs, M. D.

Inflammation of the female breast, terminating often in abscess of a more or less troublesome character, is an affection so common after pregnancy, as to be familiar to every practitioner. The irritation and congestion which accompany and succeed the secretion of milk, often exceed the healthy standard, particularly after de-

liveries with first children; the breasts become hot, tense, and painful, to which symptoms inflammation and abscess frequently succeed. When, in case of absence of the nipple or from any other cause, the breasts are but imperfectly unloaded mammary inflammation is a common sequence. When the nipples become sore, and consequently nursing extremely painful, milk is often allowed to accumulate in the breasts, until a troublesome and painful train of symptoms has been commenced, too often leading to the disease under consideration. Mammary abscess is doubtless more common in cities than in the country. Many mothers, filled with false and nonsensical notions of propriety, refuse to perform the pleasurable and sacred duty of nursing their offspring; and this foolish disregard of a natural obligation and a holy instinct, frequently entails upon the perpetrator the above mentioned affection of the breast, accompanied with no small amount of suffering and pain, and sometimes death.

The suffering and constitutional disturbance, which accompanies inflammation and abscess of the female breast, is by no means inconsiderable. But few organs are subject to disease more troublesome, pain more excruciating. Many women, suffer more from diseases of the breast, after confinement, than even during parturition. If the suffering is not as severe, it is more enduring; productive, ordinarily, of more constitutional disturbance, and often more destructive to life. In view of these facts, mammary inflammation is worthy, at the hands of physicians, of the highest consideration, and the utmost therapeutic skill.

Of the causes and symptoms of the disease under consideration, we do not propose here to speak; they are sufficiently familiar to every practitioner. Suffice it to say here, that inflammation and abscess of the female breast, is by no means a disease peculiar to the early period of nursing. The worst case of mammary abscess, that ever came under our observation, occurred in a pregnant female, several weeks previous to confinement. Another case of inflammation of both breasts, and abscess in one, that has come under our observation, came on at the time of weaning, after fifteen months of continuous nursing.

In the *treatment* of inflammation of the breast, a great variety of plans and remedies have at different times and by different persons been proposed. It is evident that the treatment must vary with the indications to be fulfilled by the administration of remedies, and the indications are three-fold. *First*, to prevent inflammation; *second*, when inflammation of the gland is present, to effect resolution; and *third*, when suppuration cannot be prevented, or has already taken place, to promote the rapid cure of the abscess.

1st. In preventing inflammation; simultaneous with the secretion of milk, its abstraction should be commenced, and in no case should the breasts be allowed to become much distended by retained secretion. The most natural way of accomplishing this, is by nursing the new-born child. But, in cases where the offspring

is still-born, or in cases where nursing is considered, from good reasons, injudicious, the breasts must be emptied by artificial means. Whatever means be employed, the evacuation should be so perfectly performed, as to prevent any considerable distension of the mammary glands. In cases of absent nipple, a false one should be substituted. These nursing attentions, always judicious and appropriate, will but seldom fail in preventing the disease. But, in case these means are neglected or prove insufficient, and the irritation and congestion of the gland exceed the healthy standard, and pain and feverishness supervene, cooling diaphoretics and saline laxatives, should be administered, unless counterindicated by other symptoms, and the breasts should perseveringly be kept emptied of the milk secretion, as directed above.

2d. When, from any cause, inflammation of the gland is absolutely present, the treatment detailed under the first indication is equally appropriate. And in addition, we have found nothing so efficacious as the local application of *iodine*. We do not now remember of making application of this remedy early, or before suppuration was absolutely and immediately threatened, but that resolution was accomplished without the formation of pus. This local remedy is not original with us, and we do not now know to whom we are indebted for the idea. If, in subsequent cases and in other hands, the remedy should prove as efficacious as in previous trials, it will most certainly be a most desirable therapeutic acquisition, in the treatment of mammary inflammation. We have thus far made the application in the form of tincture twice a-day. We advise the whole inflamed surface, to be penciled with the tincture and then covered with oiled silk. Perhaps the iodine ointment would be preferable, but we have so far been so well satisfied with the tincture, as to be reluctant to make a change.

3d. If from the neglect or insufficiency of the above mentioned treatment, suppuration should be unavoidable, poultices should be employed, and when established, the pus should be thoroughly evacuated. The abscess should never be allowed to break of itself, for, in this event, pus is apt to borough in the glandular structure of the organ, sinuses to form, extending the boundaries of the disease, until the constitution severely suffers from the extent of the suppurating surface. So soon as matter is detected, the breast should be opened sufficiently free to effect its complete evacuation. From a neglect of this direction, suffering is often very much enhanced, and the duration of the disease very much protracted. After the pus is evacuated, the breast should be thoroughly compressed, by the means of adhesive straps, so as to bring the walls of the abscess into coaptition, prevent the retention of pus, and facilitate the occlusion of the cavity. These directions are of paramount importance. If early opening and proper compression were universally resorted to, we are of the opinion that bad and protracted cases of mammary abscess would be extremely uncommon.

When sinuses do form, they should also be freely opened, and, in the event of the abscess failing to speedily heal, the cavity should be injected with a solution of iodine, of appropriate strength, in connection with compression.

Beef-tea and tonics should be employed, when the suppuration is considerable, depressing materially the powers of the system.

By faithfully fulfilling the first indication, very many cases of mammary inflammation may be prevented; by fulfilling the second, abscess of the breast may be rendered less frequent; and by attending to the third, much of suffering may be prevented and convalescence earlier established.—[*Western Lancet.*

Signs of Heart Disease.

1. That cases of valvular affection may be divided into two classes, in one of which the disease has been produced by inflammation, while, in the other, it appears to arise independently of this condition.

2. That in the first class of cases, a period arrives in which, although the disease is progressive, there is no evidence of its being of an inflammatory nature.

3. That hence it is generally improper to persist in an antiphlogistic treatment of valvular disease beyond a certain period of time.

4. That the determination of the actual seat and nature of a valvular disease is of less importance than that of the vital and mechanical state of the heart.

5. That a permanently patent state of the orifices is the ordinary result of all valvular diseases. This condition may or may not be attended with contraction, or the orifices may be dilated.

6. That the period when inadequacy of the valves supervenes, varies greatly in different cases.

7. That hence, two series of phenomena may occur; in the first we have the signs of disorganization without inadequacy; in the second those of inadequacy are added.

8. That the distinctness of valvular murmur cannot be taken as being proportionate to the amount of disease.

9. That a complete cessation of murmur may coincide with the advance of the disease.

10. That the cessation of murmur, under these circumstances, has been only observed in connexion with contraction of the orifice; it has not been observed in cases of free regurgitation.

11. That absence of murmur does not necessarily imply absence of valvular disease, especially if there be symptoms of disease of the cavities.

12. That the number of cases in which we are warranted in making a special diagnosis of valvular disease is small.

13. That the number of pathological conditions competent to

cause such changes in the valves as will produce murmur is very great.

14. That in the earlier periods of valvular disease, murmur may not occur, although the disease be progressive.

15. That even in chronic cases, the development of murmur may be sudden.

16. That the disorganizing process may advance with great rapidity, or with slowness, and that, in some cases, it appears to be really arrested.

17. That the irregular action of the heart is much more related to the state of the cavities than to that of the valves.

18. That we may observe the sudden development of the symptoms as well as of the physical signs of chronic disease of the heart.

19. That three conditions of the heart, considered in its vital relations, may accompany or follow valvular disease:—

1.—Increased force of the heart.

2.—Diminished force, with rapidity and irregularity of action.

3.—Diminished force, with remarkable slowness and comparative regularity of action.

20. That the law which regulates the production of the alteration of the cavities, which follows on valvular obstruction, with or without inadequacy, is still undetermined.

21. That considering the rarity of organic change in the valves at the right side of the heart, and the difficulty or impossibility of their special diagnosis, we may in a practical point of view, limit our considerations to the diseases of the mitral and aortic valves.

22. That in the diseased and permanently patent condition of the valves of the pulmonary artery, a double murmur at the base of the heart, not propagated into the aorta, and not attended with general arterial throbbing, has been observed.

23. That in most cases of organic disease of the valves at the right side of the heart there is either an open foramen ovale, or a deficient ventricular septum.

24. That the most frequent result of disease of the right auriculo-ventricular valves is but the exaggeration of their natural insufficiency.

25. That we cannot by the ordinary acoustic tactile signs determine the existence of dilatation of the right auriculo-ventricular orifice.

26. That reflux pulsations in the veins of the neck, and occasionally in those of the upper extremities, indicate regurgitation into the right auricle.

27. That hence they may be taken as indicating the insufficiency of the valves, and may have, as their remote cause, morbid conditions of the pulmonary artery, the lung, or the left side of the heart.

28. That of these different lesions the most frequent is contraction of the mitral orifice.

29. That the venous pulse thus produced may be permanently present, or only developed during an attack of cardiac asthma.

30. That the pulsations in the jungular veins are synchronous and isochronous with the ventricular systole.

31. That we must not depend on any acoustic character of the murmur, nor even on its exact seat, for the diagnosis of valvular disease. It is requisite to combine with these considerations those of the history and symptoms of the case, as well as those which have reference to the state of the pulse, the force of the heart, and the condition of the lung and liver.

32. That all diagnostics depending solely on the tone, character, and seat of murmur, are more or less doubtful.

33. That although by acoustic signs we may often determine the insufficiency of a valve, yet there are no means by which, from the stethescope alone, we can declare the cause of that insufficiency.

34. That the diagnostics between the contraction and dilatation of any of the orifices, founded on acoustic phenomena, are to be rejected.

35. That organic and anæmic murmurs may co-exist.

36. That there are no distinctive symptoms of disease of the mitral valves, when it is uncomplicated with alteration in the vital or mechanical state of the cavities.

37. That its principal physical indication is a murmur which is systolic, but not propagated into the arteries, and loudest towards the apex and to the left side. This may or may not be attended with fremitus.

38. That the most common result of contraction of the mitral opening is pulmonary congestion, with enlargement of the right cavities of the heart.

39. That under these circumstances, from the preponderance of the right ventricle, a globular form of the heart may be produced.

40. But a globular form of the heart may exist with a dilated mitral opening, attended with enlargement of the left ventricle, while the right remains unaffected.

41. That the combination of a contracted state of the mitral opening, with permanent patency of the aortic valves, is of frequent occurrence.

42. That under these circumstances, we may occasionally observe both the aortic and the mitral murmurs.

43. But that the absence of a mitral murmur, in a case of permanent patency of the aortic valves, does not necessarily imply that the auriculo-ventricular opening is free from disease.

44. That in cases of mitral contraction moveable coagula may be formed in the left auricle, which may, by occlusion of the opening, become a cause of sudden death.

45. That with the progress of contraction, the mitral murmur may gradually subside, and ultimately become extinct, so that with the increase of disease, we may have decrease and cessation of murmur.

46. That this cessation of murmur may coincide with a permanently patent though contracted opening.

47. That inasmuch as most cases of mitral murmur are systolic, they are to be held as regurgitant. We cannot by acoustic signs, distinguish between the direct constrictive and the regurgitant murmur.

48. That the interscapular murmur may attend constriction or dilatation of the mitral opening, but appears more allied to the latter than to the former condition.

49. That the interscapular murmur may be consequent on a recent and acute disease of the heart.

50. That the existence of a presystolic murmur, which theoretically should imply that it attended the passage of blood from the auricle into the ventricle, does not justify the diagnosis of absence of regurgitation through the mitral orifice.—[*Stokes on Diseases of the Heart and Aorta. Western Jour. of Med. and Surgery.*

On the Application of Protosulphate of Iron in Erysipelas. By M. Velpeau.

M. Velpeau observes, that true erysipelas is constantly confounded with other inflammations (viz., phlebitis, diffuse phlegmon of the cellular tissue, and angioleucitis,) which differ from it in their causes, seat, progress, danger, and treatment. A prolonged consideration of the nature of the affection has led him to lay down the following propositions.

1. Erysipelas, taken in its surgical sense, has its predisposing cause much oftener in external atmospheric, or meteorological, influences than in the state of health, or general constitution of the patient. 2. The determining or occasional cause is, almost always a wound, scabs, or some irritation of the integument. 3. Its efficient cause is, matter proceeding from without, or altered tissues, which mingle primarily or secondarily with the fluids of the part affected. 4. The fluids so affected induce general and local phenomena. The first occur before the second when there is, at the beginning, a passage of the fluids into the general current of the circulation. The order of occurrence is reversed when the change only takes place through imbibition. 5. The fluids in the inflamed skin, altered by the morbific element, only seem to circulate or advance, by endosmosis—the erysipelas still, however, spreading itself along the dermis like oil upon a plain surface. 6. A large proportion of the morbific matter remains to the end under the epidermis, or in the cutaneous tissue, mingled with the blood in the inflamed part. 7. The totality of the erysipelas is almost constantly formed of several small successive erysipelases. 8. An isolated patch of erysipelas ordinarily disappears, of its own accord, in six or eight days. 9. The duration of the entire disease is very variable, according to the number of erysipelas patches

that may succeed or combine with each other. 10. The remedies employed, whether external or internal, to be capable of dissipating such a disease, should especially possess the power of modifying the condition of the blood.

M. Velpeau furnishes us with the results of the different forms of *treatment* he has employed in above 1,000 cases, in 400 of which he has kept exact notes. In 25 patients, *compression* by bandages was resorted to, with no advantage. In 33 *flying blisters* were applied, without diminishing the mean duration of the disease; these proving advantageous only in certain cases of phlegmonous erysipelas and angioleucitis. No satisfactory result followed the employment of *nitrate of silver* in 30 cases. In 200 cases, *mercurial ointment* was resorted to, with the effect of sometimes diminishing the duration of the affection by a day or two, and rendering it a little less painful. It is, however, very repugnant to the patient, spoils the linen, and sometimes induces salivation. *Lard* employed in 23 cases, although not causing these inconveniences, was found even less efficacious. A variety of other substances have been tried by M. Velpeau, but, as he found them useless or injurious, we need not advert to them.

Calling to mind the modifications which the preparations of iron produce in the blood, it seemed to him that a disease so superficially placed, and one in which the inflamed tissues are so imbibed with altered fluids, was well calculated to be influenced by by ferruginous preparations. He employed the *protosulphate of iron* in the proportion of 30 *grammes* to the *litre* of water, (1 drachm to 5 fluid ounces,) or 8 parts to 30 of lard. In forty cases in which this was tried the erysipelas yielded in from twenty-four to forty-eight hours. It is, however, remarkable, that when thus extinguished at its point of departure, it will still spread beyond this, along parts already imbibed with the iron. Whether the inflammation, in order to undergo modification, requires to become fully developed, and whether the remedy is merely curative without being preventive, further researches must show. More easily employed to some parts, the ointment would be preferable; but it is somewhat less efficacious than the lotion. When used it should be applied three times a day to the erysipelatous patch, and some way beyond its margin. The lotion should be applied by means of compresses, which are to be kept on with bandages, and wetted every few hours, so as to keep the skin always moistened. Thus far the remedy has never failed in cutting short the erysipelas; but it has a disadvantage in iron-moulding the linen.—[*Bulletin de Thérapeutique. London Medical Times and Gazette.*

External Use of the Acid Nitrate of Mercury.

A solution of the nitrate of mercury in strong nitric acid is in very common use at the Hospital for Cutaneous Diseases, and constitutes a very convenient form of caustic. Its formula is—℞. Hy-

drargyri ℥j, acidi nitrici (specific gravity 1.50) ℥ij; solve. The solution produced is a clear, colourless fluid. The following may be mentioned as some of its chief uses:—

In Carbuncle.—Mr. Startin usually applies the caustic if the carbuncle be of not more than moderate size, to but one central spot, where it is freely painted for an extent of about a shilling in size. Its effect is to produce an eschar, from beneath which the core afterwards escapes.

In Acne.—A very minute drop of the acid is placed by means of a finely-pointed glass brush, on the apex of any indolent tubercles, whether suppurated or otherwise. It has the effect of opening the pustule, if matter have formed, and if not, induces the disappearance of the induration. The application is followed only by a little smarting pain, and if it have been carefully made leaves no scar.

In Boils.—There can, we think, be little doubt as to the superiority of the caustic treatment over that by the knife, even in the case of very large boils. The pain of the incision, the large sore caused, and the unsightly scar which follows, constitute very formidable drawbacks to a practice for which there is no real necessity. At this hospital, where cases of boils are very common, the knife is never resorted to. The general treatment consists in giving aperients and steel conjointly, and the local in applying to the apex of the furuncle a full-sized drop of the acid nitrate solution. The morbid action generally terminates coincidently with the application, and the core is thrown off through a comparatively small opening, the resulting cicatrix being insignificant.

In Lupus.—The acid nitrate is one of the most efficient and convenient forms of caustic in this disease. Mr. Startin does not, however, employ it solely, but uses also the biniodide of mercury, and a paste of which arsenic is the principal ingredient. The acid nitrate is chiefly used in indolent tubercles, and to indurated patches not actually ulcerated. After ulceration has occurred the arsenical paste is preferred.

For Sloughing Ulcers.—The practice of treating unhealthy ulcerations, wherever situated, by means of caustics, is much pursued at this hospital, and with excellent results. The pain attending the application of nitric acid has been much overrated by the profession generally, and its use has consequently been avoided in many instances in which it would have been efficient to completely change the course of the morbid action and induce healthy processes. Its powers in cases of phagedæna are now widely recognized, and its use will probably soon extend to various other kinds of ulceration of somewhat similar nature, but much less severity. The pain spontaneously caused by an unhealthy sore during a single night is probably much more than that produced by an application of caustic. In most cases of sloughing or unhealthy ulcers, Mr. Startin employs either the solution of the acid nitrate or the arsenical paste just referred to. The rapidity with which the surface granulates afterwards is often surprising.

In Moles, Nævi, etc.—Small moles on the face, if superficial and not too thick, may be readily destroyed by the acid nitrate. A cicatrix of course results, but it is small, and far less unsightly than the original disease. Small cutaneous nævi are often treated both at this and the various other London Hospitals, by means of the nitric acid. Unless the disease be of very small extent, the employment of a ligature appears to be a much more certain means of effecting the end desired. If there be a subcutaneous base to the morbid structure it often persists in growing, despite frequent applications of escharotics. There is a mild form of dilated cutaneous capillaries which produces the marks known as "port-wine stains," "spiders," etc., in the treatment of which much benefit may be obtained by the dexterous application of fluid caustics. With a finely pointed glass brush, charged either with nitric acid or the acid nitrate of mercury, the tortuous vascular trunks should be severally painted, a minute streak of the caustic being thus left along the whole course. In this way, by repeated applications, the whole of the larger vessels may be destroyed, and the disfigurement, to a large extent, diminished The "port-wine stain" is of course very much more difficult to remove than the less diffused forms of this condition, such, for instance, as are of frequent occurrence on the cheeks or nose; even in it, however, much benefit may by patient treatment be gained.—[*Medical Times and Gazette.*

Treatment of Spermatorrhœa.

M. Trousseau thinks that the advantages of Lallemand's *porte caustique* have been considerably overrated, and that there are only certain cases in which its use is productive of benefit. It is very useful where chronic urethritis co-exists with the spermatorrhœa; but where that is absent, he thinks we ought to trust to other modes of treatment more suited to the cause of the disease.

The excessive debility induced by spermatorrhœa demands our most serious attention. If, in serious cases, we find neither urethritis nor cystitis present; if we discover neither calculi nor ascarides, nor any other thing which can explain the persistence of the emissions, we ought to ask ourselves whether the disease does not depend upon a condition of the vesiculæ seminales analogous to the spasmodic state of the bladder in certain forms of incontinence of urine. Puerile enuresis is not due to atony of the bladder, or to any undue accumulation of urine, but to a spasmodic condition of the bladder. The same phenomenon occurs in the vesiculæ seminales; and belladonna, which acts so beneficially in the case of the bladder, is also very useful in this other spasmodic condition. M. Trousseau prescribes accordingly, in such cases, powders containing each 1 centigramme of the powdered root of belladonna, mixed with sugar. He orders one to be taken daily during the first week of treatment; two daily during the second, and so on until the pa-

tient experiences a sensation of dryness in the throat. At the same time, he orders frictions of the perineum with an ointment composed of 10 grammes of the alcoholic extract of belladonna to 20 grammes of axunge. If necessary, he also uses suppositories containing each 10 centigrammes of the extract belladonnæ.

M. Trousseau doubts the utility of cold hip-baths in this affection. They may do good the first time they are used, but although they may temporarily arrest venereal excitation in nymphomania and priapism, this calm disappears on the occurrence of reaction, and the evil is increased.

Heat acts in an opposite manner. Hence M. Trousseau believes that, in cases where erotic feelings are conjoined to spasm of the vesiculæ seminales, it is the best sedative which we can employ simultaneously with belladonna. The form in which he employs it is that of bags of heated sand, which he applies to the perineum for a few minutes, morning and evening. The simultaneous administration of lupulin may be very beneficial; but, where we desire decided anaphrodisiac effects, M. Trousseau recommends, on account of the certainty and efficacy of its action, the bromide of potass, in doses of from 15 grs. to 3ss. daily.—[*Monthly Jour. of Med. Science* from *Jour. de Med. et de Chirurg. Prat.*

Note on the Induction of Sleep and Anæsthesia by Compression of the Carotids. By Alexander Fleming, M. D., Professor of Materia Medica, Queen's College, Cork.

While preparing a lecture on the mode of operation of narcotic medicines, I thought of trying the effect of compressing the carotid arteries on the functions of the brain. I requested a friend to make the first experiment on my own person. He compressed the vessels of the upper part of the neck, with the effect of causing immediately deep sleep. This experiment has been frequently repeated on myself with success, and I have made several cautious but successful trials on others. It is sometimes difficult to catch the vessels accurately, but once fairly under the finger, the effect is immediate and decided.

There is felt a soft humming in the ears, a sense of tingling steals over the body, and in a few seconds, complete unconsciousness and insensibility supervene, and continue so long as the pressure is maintained. On its removal, there is confusion of thought, with return of the tingling sensation, and in a few seconds consciousness is restored. The operation pales the face slightly, but the pulse is little, if at all, affected. In profound sleep the breathing is stertorous, but otherwise free. The inspirations are deeper. The mind dreams with much activity, and a few seconds appear as hours, from the number and rapid succession of thoughts passing through the brain. The experiments have never caused nausea, sickness, or other unpleasant symptom, except in two or three instances, languor. The

period of profound sleep, in my experiments, has seldom exceeded fifteen seconds, and never half a minute.

The best mode of operating is to place the thumb of each hand under the angle of the lower jaw, and, feeling the artery, press backwards, and obstruct the circulation through it. The recumbent position is best, and the head of the patient should lie a little forwards, to relax the skin. There should be no pressure on the windpipe.

The internal jugular vein must be more or less compressed at the same time with the carotid artery; and it may be thought that the phenomenon is due, wholly or in part, to the obstructed return of blood from the head. I am satisfied that the compression of the artery, and not of the vein, is the cause. The effect is most decided and rapid when the arterial pulsation is distinctly controlled by the finger, and the face loses somewhat of its colour; and, on the other hand, is manifestly postponed and rendered imperfect when the compression causes congestion of the countenance.

This mode of inducing anæsthesia is quick and certain. The effects diminish immediately when the arteries are relieved from pressure, and are not liable to increase, as happens sometimes from chloroform and ether, after the patient has ceased to respire the vapours. So far as my experience goes, it has shown no tendency to cause faintness; and usually, after its employment, no unpleasant feeling whatever remains.

I think it may be found useful as a remedial agent in certain headaches, tetanus, asthma, and other spasmodic diseases, and to prevent pain in such small operations as the extraction of a tooth or the opening of an abscess. Whether the compression can be continued *with safety* sufficiently long to make it available in larger operations, has to be ascertained. But, whatever be the practical value of this observation, it is at least interesting as a physiological fact, and may be the means of throwing light on the causes of ordinary, medicinal, and hypnotic sleep, and of coma. Some facts encourage the supposition that the circulation of the brain is languid in ordinary slumber, and the etymology of the word carotid shows the ancient belief in the dependence of deep sleep on some interference with the passage of the blood through these vessels; and it is not an unreasonable conjecture, that hypnotic sleep may be sometimes caused or promoted by the contracted muscles and constrained position of the neck compressing the carotid arteries, and diminishing the supply of blood to, and pressure on, the brain.—[*British and Foreign Med. Chir. Review. Charleston Med. Journal.*

Fumes of Asphaltum as a Preventative of Cholera.

Dr. Mitchell, of Trinidad, communicates some singular facts with reference to the recent visitation of Cholera. "Nearly the whole island suffered, but the swampy and febrile districts were generally last attacked, and suffered least. There was one exception; the Lake of La Brea ("the pitch lake") escaped altogether, although in-

habited by a poor and unhealthy community. In the town of San Fernando, a quantity of asphaltum had been thrown under and around a house; the inmates of that house alone escaped the Cholera. The badly-ventilated cells of the prison of San Fernando are floored with asphaltum; no case of cholera occurred. Is, then, asphaltum a preventive?"

The asphaltum lake of Trinidad, as most persons are aware, is a circular basin of about a mile in diameter, situate on high ground near the sea. In warm weather it is liquid at the top, and exhales a strong odour; at other times it is soft and ductile; sometimes hard and of conchoidal fracture, like other bitumens. It is considered to be the true asphaltum bitumen of Linnæus.

I well remember that during the first invasion of cholera it was remarked that the persons employed in all the gas works enjoyed a remarkable exemption from cholera; so much so that, as was affirmed, not one of them had been attacked. Is there not here a connection between this observation and the facts stated by Dr. Mitchell? It seems to me that there is, and of too striking a character to be overlooked. The coal-tar of the gas works, when evaporated, is in fact asphaltum.

It is for the consideration of the faculty, may not public fumigations of infected localities by burning large quantities of coal-tar in the streets or roads, be an adjuvant to good scavenging? May not the volatilization of asphaltic fumes from a hot shovel in houses where cholera exists, assist the efforts of the physician? Tar vapour is an old prophylactic, and perhaps is not without its use. Coal-tar is of a nature not very different.

In so formidable a disease as cholera, the proposal of a new remedy may, it is true, involve a fearful responsibility; but a suggestion supported by probability, unattended with danger, and not in the least interfering vicariously with such means as have been found efficient (if such there be,) is surely warrantable, and deserving of consideration.—[*Dublin Med. Press.*

Regeneration of Tendons.

Boner has instituted some experiments on the regeneration of tendon, for which purpose he made sections of the tendo-Achillis in the rabbit, and examined the parts at various times after the date of section. He finds that when a plastic exudation takes place, the walls of the sheath of the tendon become united, and finally degenerate into a thin solid string, the use of the tendon becoming permanently lost. On the other hand, when an effusion of blood takes place, perfect union of the divided parts is subsequently brought about. The effused blood coagulates very soon, the blood-corpuscles become disintegrated, the fibrin softens, and, after a couple of days, the whole presents a homogeneous, here and there granular, appearance. On the fourth day, the blood-corpuscles have almost completely disappeared, the whole mass being uniformly red, and

filled with granules; round cells, with large indistinctly-bordered nuclei, begin to be seen, but soon lose their rounded form, and become elongated, the nuclei assuming a spindle shape. In eight to ten days, the coagulum has become almost completely white, the cells are very delicate in outline, and thin prolongations are thrown off from them, which here and there may be traced connecting one cell with another. The intercellular substance shows a clear longitudinal striation, which is more marked each day, and the whole coagulum more and more assumes the appearance of a true tendon, the tendinous tissue being completely organized about the end of the second week; it is not, however, till the fourth week, or even later, that the normal strength and consistence of tendon are assumed.

Boner concludes from his investigations that the structure of tendon, like that of the cornea, is made up of flat stellate cells, or a fibrous intercellular substance.—[*Med. Chirurg. Rev.* from *Virchow's Archive. American Jour. of Med. Sciences.*

Particular Method of Applying Cauterization for the Reunion of Anomalous Fissures, and especially those of the Palate.

M. Cloquet proposes, in divisions of the *velum palati*, to take advantage of the great amount of retraction which occurs in the cicatrix consequent on burns.

We need not in such cases, says M. Cloquet, cauterize the edges of the fissure througout their whole length, converting them into a granulating sore, the cicatrization of which must be afterwards assisted by sutures, appropriate bandages and the maintenance of correct adaption. This method, long known to the profession, sometimes succeeds, but often entirely fails. The one which I propose, adds M. Cloquet, consists in applying the cautery to the angle of the fissure, and that only to a limited extent; leaving the contraction of the cicatricial tissue to operate, and then, practising a similar cauterization, and waiting for some time to renew the application in such a way as by repeated operations to bring the edges of the division towards each other, and to unite them by a succession of cicatrizations which may be regarded as so many successive points of suture. The double advantage is thereby gained of being thus enabled to watch, step by step, the results of the treatment, and to obtain unions of the most difficult nature by an operation, simple, scarcely painful, and exempt from all danger. It is especially in fissure of the palate that M. Cloquet considers the advantages of this mode of operating as incontestable, and he mentions four cases in all of which the operation had been attended with equally successful results. There had been no pain felt, no change in habits or regimen necessary, and no complications had arisen. The operation was of the most simple nature, every surgeon could perform it. It required the aid of no assistant, an advantage of great importance in country practice; and, lastly, it could be practised on very young children. One objection urged against this method

was the length of time required for completion of the cure, but the slowness of its action constituted its safety, and the inconvenience arising in this way was very small, as the patient experienced no alteration in his health or habits during its progress.

The cauterization may be effected by two different means; namely, either by caustics or the actual cautery. M. Cloquet states that in the first of those cases where he attempted this method, he used, as the cauterizing agent, the acid nitrate of mercury, and succeeded completely. However, he prefers the actual cautery, its action being deeper, almost instantaneous and consequently less painful, while it occasions a more firm cicatrix, and one which becomes more rapidly organized. The three other patients were treated in this manner, and the results obtained confirmed his opinion on this point. An almost insurmountable obstacle to its employment might be, however, occasionally met with in the terror of the patient. But, fortunately, science provides us with a means of obviating this inconvenience; as a platina wire introduced within the mouth, before the electric circuit is completed, cannot excite the patient's alarm, and as it can afterwards by this means be brought to a white heat, and be kept incandescent for any length of time, the surgeon is enabled to act with all the calmness and precision desirable.—[*Monthly Jour. of Med.*, from *Gaz. Médicale.*

A Great Medical Discovery—Mercury taken from the System by Electricity.

The following article is taken from a Western paper:

The following will be received with intense interest in every community where suffering of any kind is produced by metallic substances being introduced into the system in the way of mercury, gold, silver, or lead. If it is practically true, as scarcely any one can doubt, under the circumstances, it is destined to rank among the greatest discoveries that science has yet brought to light.

The article which follows, published in the Scientific Bulletin of Paris, is entitled "The Application of Chemical Electricity to Therapeutics," and has been translated for this paper. Though not literal, the substance of the article is intact. The Bulletin says:

Chemistry is about to drag from an anticipated death thousands of men, who, in the exercise of their cruel professions—gilding, looking glass plating, white lead manufacturing, &c., and also those whose systems have been ruined by mercury in its various forms—for these science has raised her right arm and arrests their misery and destruction. This discovery extracts from their bodies, atom by atom, every particle of metallic substance from every part of the human system. Where do we get this great hope? In a memoir presented to the French academy of sciences by M. Dumas, which has for its authors two men, whose names will strike the ear of the public for the first time to-day. But if they prove what they pro-

mise to, they will soon take rank among the greatest benefactors of humanity. These authors are Andre Poly of Havana, and Maurice Vergenes. The invention consists of an application of chemical electricity to accomplish the above purpose; and of all the marvellous things that electricity has achieved, this is the boldest and most triumphant.

The modus operandi is as follows:

A metallic bath is insulated from everything, and partially filled with acidulated water, to convey more readily the electrical currents. The patient lies upon a seat in the tub insulated entirely from the bath. When gold, silver or mercury is in the system, nitric or hydrochloric acids are employed. When lead is suspected the acid used is sulphuric. This done, the negative pole of a battery is put in connection with the bath, while the positive pole is in the hands of the patient. Now the work of purification commences. The electricity precipitates itself, hunts, digs, searches, and discovers every particle of metallic substance concealed in the most profound tissues, bones, joints, and nerves of the patient, resolves them into their primitive forms, and extracting them entire from the human organism, deposites them upon the sides of the bath, where they can be seen with the naked eye.

After the end of one of these operations, a chemist of Havana, M. Mossand, having analized 912 drachms of the liquid in the bath, he saw forming a metallic globule of the diameter of nine-tenths of a milimetre, and this was mercury. At another time the same chemist saw a very light white precipitated substance, which gave two globules of metallic lead, perfectly visible to the naked eye, and M. Poly announced that he had taken from the tibia and thigh bone of a patient, a quantity of mercury that had been there, creating intense suffering for fifteen years.

Providence has had its usual hand in this discovery. One of the inventors, M. Maurice Vergenes, who was engaged at times in electric gilding, silvering, &c., where his hands came in continued contact with the nitrate and cyanuret of gold and silver, had them covered with ulcers, caused by particles of the metal being introduced into his blood, and no medical skill could eradicate them. One day he dipped his hands into the bath, taking hold of the positive pole of the battery, and at the end of fifteen minutes, to the surprise of the bystanders, a metallic plate of 163 milimetres in length by 109 in width placed in connection with the negative pole of the battery, was instantly covered with a thick coat of gold and silver extracted from his hands. The discovery was made. This event took place April 16, 1852. The inventors use 30 couples or batteries or Bunson's and Grove's combined, it being found that a more energetic current will be evolved by this combination than by the use of either singly. Each couple is 40 milimetres in diameter by 217 in height. The number of these couples or batteries used at the commencement of an application, so as not to cause too much suffering for the patient, depends altogether upon the temperament of the

patient and the nature of the disease. For example, a very nervous and delicate person would be submitted to the action of ten or twelve couples at first, the number increased at the rate of five couples every five minutes. A person of sanguine or lymphatic temperament can endure more. The same ratio applies to the quality of acid in forming the bath; for instance it takes less for a nervous person than for a person with lymphatic or sanguine temperament. The metallic particles extracted from the body of the patient are deposited on the whole surface of the bathing tub, although the metal is formed in larger quantities opposite those parts of the body in which the metal lay concealed. As to the size of the metallic spots which are thus formed by the application of this discovery, they vary in size from that of the head of a pin to the size of a pea, and some are microscopic.

"I have seen," says M. Poly, "after the first bath of a person who had been complaining of terrible pains in his arms, caused by mercury, the exact shape of the arm imprinted on the negative plate of the battery—the deposite being formed entirely of mercury drawn from the arm."

Here ends this important article, which, if true, is destined to become as much a part of the medical practice as vaccination.

[*Stethoscope.*

The Administration of Chloroform to Children. By M. Debout.

While advocating the employment of chloroform in intense chorea, endangering life itself from the violence of the movements, (cases of which are not uncommonly met with in the Paris hospitals,) M. Debout takes occasion to advert to the precautions to be observed in its administration to children. Having frequently employed it in considerable quantities, he has never observed any ill effects result, not even, indeed, the slighter inconveniences that occasionally attend its use in the adult. We must always bear in mind, however, that at the commencement of the inhalation in chorea and other spasmodic diseases, an increase of the muscular movements takes place, the child sometimes offering very great resistance; but by persevering a calm is speedily induced. As a general rule, the child is soon rendered insensible, and the sleep may continue ten, fifteen, or even thirty minutes. Such prolongation need give rise to no uneasiness, as the pulse and respiration will be found quiet and regular, and the countenance that of a child in a natural sleep. Usually the child wakes suddenly, looks around it as if astonished, and then gets up to play or to eat. Headache and the feeling of stupor which in some adults persist for the entire day, are not met with in children; and, indeed, as far as the production of effects of this kind upon the general system are concerned, children can inspire larger quantities of chloroform than adults. We hardly ever find the loss of appetite so frequently met with in the adult, children often eagerly demanding food, and not rejecting it. Their power of tolerance is certainly greater.

Before administering it, we should be sure that the stomach is empty, in order to prevent the production of nausea or vomiting, which fatigues the little patient and induces a disgust for the means employed. We should pay great attention to the pulse and respiration. As a general rule, the pulse, which from the efforts made during the administration of the chloroform is accelerated, becomes slower during sleep, to rise again when that ceases. From fifteen to twenty-five pulsations less may be often noted during sleep. The disturbed respiration soon becomes as regular as in natural sleep. Care must be taken that it be not impeded by ligatures or articles of dress, and if the room is small, fresh air should, as soon as sleep is secured, be freely admitted. By attending to these rules even considerable quantities of chloroform may be administered without fear, if no organic lesion contra-indicates its use.

M. Debout employs merely a compress twisted as a cone, cutting a small hole in the apex, and securing in this orifice a piece of fine sponge. Upon this, from ʒiiss. to ʒv. of chloroform are poured; and the base of the cone can be applied to the mouth and nostrils without alarming the child, or the risk of hurting it in following its various movements.—[*Bulletin de Thérpeutique. Virginia Medical and Surgical Journal.*

Digitalis Pommade in Hydorcele.

Last spring, an Italian surgeon named Bellucci published accounts of five cases of hydrocele cured by the external use of digitalis. Little attention was paid by surgeons to these results; but very recently M. Laforgue, chief surgeon in the *Hôpital de la Grave*, at Toulouse, has made trial of the new mode of treatment, and found it to be as efficacious as was alleged by M. Bellucci. A man æt. 60, had a large hydrocele of the right testicle, and being unwilling to submit to the usual operation, besought M. Laforgue to try some other method. Daily friction of the tumour was ordered with the following ointment: ℞.—Pulv. folior. digitalis, 6 grammes; axung. 30 grammes; *misce.* The patient was also ordered to wear a suspensory bandage. In a few days, the man presented himself completely cured. He had enjoyed excellent health during the process, and had used, in all, 18 grammes of the powder of digitalis.—*Gaz. des Hôpitaux. American Jour. of Med. Sciences.*

Treatment of Vaginitis.

The *Union Medicale* of Jan. 18th, contains an interesting paper by MM. Becquerel and Rodier, on the different modes of treatment employed in vaginitis, founded on observations made at the Hospital of Lourcine, at Paris. Although no description is given of the disease, we presume that most of the cases were those of acute and chronic *gonorrhœa*, as the hospital is designed exclusively for the treatment of the venereal diseases of women. The following appli-

cations were employed for a considerable length of time upon a large number of patients.—1. A concentrated solution of nitrate of silver.—2. A more diluted solution of the same (16 parts of the salt to 120 of water.)—3. The solid nitrate of silver. 4. Tincture of iodine.—5. An ointment composed of lard and alum.—6. A concentrated solution of tannin.—7. Benzia, employed internally, as well as locally. Of all these applications, the writers consider the concentrated solution of tannin (equal parts, by weight, of tannin and distilled water), applied directly upon the inflamed mucus membrane of the vagina, to be the best, as being the least painful, and least offensive. Of 28 cases treated in this way, all were cured, the average time being from 20 to 27 days, and the number of applications from 7 to 8. The tincture of iodine was found to be an excellent application for chronic and acute vaginal leucorrhœa, not accompanied by an inflammatory condition of the mucous membrane; requiring between 12 and 13 days, and 4 or 5 applications.

[*Boston Med. and Surg. Jour.*

New Method of Treatment for Otorrhœa. By James Yearsley, Esq., Surgeon to the Metropolitan Ear Infirmary, &c.

I come now to mention the manner of applying this remedy. First of all, the passage of the ear is to be carefully cleansed by gently syringing it with warm water, and the moisture removed by means of a porte-sponge. The parts are now to be so clearly displayed by the aid of a powerful gas-reflector, that the necessary manipulations may be readily and accurately accomplished, when I take a small piece of dry cotton—the size of which varies according to the circumstances of the case—and adjust it by gently pressing down every part of it upon the surface from which the discharge proceeds, exactly as if dressing an ulcer on any other surface of the body; this done, quiet is enjoined, restricting, as much as possible, every movement of the jaw, such, for instance, as takes place in eating and speaking. Twenty-four hours afterwards I remove this, and apply another dressing of the cotton. The importance of restricting the patient from moving the jaws will be at once manifest, if the reader will take the trouble to place the point of a finger in the passage of the ear, and read aloud the present paragraph. It will then be perceived how easily the cotton, however accurately adjusted, may be loosened and moved from its state of exact apposition. In eating, this detachment takes place still more readily, yet the patient cannot be debarred all use of the jaw, seeing he must have food; nor if great care be taken to keep the jaws in a state of motionless apposition, need speech be altogether interdicted; but for the same reason the food should be such as to require no mastication.

The successful treatment of external otorrhœa by the same simple means has been hitherto no less rapid than certain. Moreover, in nearly every case, relief of the deafness has accompanied the ces-

sation of the discharge—a result the reverse of that which follows, almost invariably, the treatment of external otorrhœa by astringent injections. The arrest of the discharge may, indeed, by such means, be accomplished in many instances without any great difficulty; but when that has been effected, we have no great reason to rejoice at a cure that has been produced at the expense of the patient's hearing.—[*London Lancet.*

The Changes Produced in the Blood by the Administration of Cod Liver Oil and Cocoa-Nut Oil. By Dr. Theophilus Thompson, F. R. S., Physician to the Consumption Hospital at Brompton.

The author has found, that during the administration of cod-liver oil to phthisical patients their blood grew richer in red corpuscles, and he refers to a previous observation of Dr. Franz Simon to the same effect. The use of almond-oil and of olive-oil was not followed by any remedial effort; but from cocoa-nut oil, results were obtained almost as decided as from the oil of the liver of the cod, and the author believes it may turn out to be a useful substitute. The oil employed was a pure cocoa oleine, obtained by pressure from crude cocoa-nut oil, as expressed in Ceylon and on the Malabar coast from the Copperah or dried cocoa-nut kernel, and refined by being treated with an alkali, and then repeatedly washed with distilled water. It burns with a faint blue flame, showing a comparatively small proportion of carbon, and is undrying. The analysis of the blood was conducted by Mr. Dugald Campbell. The whole quantity abstracted having been weighed, the coagulum was drained on bibulous paper for four or five hours, weighed, and divided into two portions. One portion was weighed, and then dried in a water-oven, to determine the water. The other was macerated in cold water until it became colorless, then moderately dried, and digested with ether and alcohol, to remove fat; and, finally, dried completely, and weighed as fibrin. From the respective weights of the fibrin, and the dry clot, that of the corpuscles was calculated. The following were the results observed in seven different individuals affected with phthisis in different stages of advancement:—

		Red corpuscles.	Fibrin.
First stage, before the use of cod-liver oil,	Female,	129·26	4·52
	Male,	116·53	13·57
First stage, after the use of cod-liver oil,	Female,	136·47	5·00
	Male,	141·53	4·70
Third stage, after the use of cod-liver oil,	Male,	138·47	2.23
Third stage, after the use of cocoanut oil,	Male,	139·95	2·31
	Male,	144·94	4·61

[*Virginia Med. and Surg. Jour.*

EDITORIAL AND MISCELLANEOUS.

A Practical Treatise on the Diseases and Injuries of the Urinary Bladder, the Prostate Gland, and the Urethra. By S. D. Gross, M. D., etc., etc. 2d edition. (For sale by T. Richards & Son.)

We are indebted to the publisher for the second edition of Prof. G.'s valuable Treatise. It contains a considerable amount of new matter, and is, therefore, still more worthy of the extensive patronage enjoyed by the first edition. Diseases of this group of organs are so common, as well as important, that every practitioner ought to be well supplied with books of reference on the subject, than which none in our language is better than the one before us.

The Pathology and Treatment of Leucorrhœa. By W. Tyler Smith, M. D., &c., &c. Philadelphia: Blanchard & Lea. 1855. (For sale by Richards & Son.)

This is an enlarged edition of the work that first appeared in the Medico-Chirurgical Transactions, of England. Dr. Smith has devoted more attention to the interesting subject of which he treats, and, although we may not be prepared to endorse all his views, we heartily commend the work to the attentive perusal of the Profession. It is highly instructive, and well written.

A Pocket Formulary and Physician's Manual, embracing the art of combining and prescribing medicines to the best advantage; with many valuable Recipes, Tables, &c., adapted to the Profession throughout the United States. By Thomas S. Powell, M. D., of Sparta, Georgia. Savannah: W. Thorne Williams. 1855.

This work will be found to contain many things of value to the Profession, particularly to the younger members. The work would have been more valuable had the author given his authority for each recipe.

Pamphlets received:—Thoughts on Yellow Fever. By J. S. McFarlane, M. D. New Orleans.——Pustule Maligne: an Inaugural Essay. By Daniel Wadsworth Wainwright, of New York city.——A Paper on Protracted Valvular Disease of the Heart. Read before the Society of Statistical Medicine, by John W. Corson, M. D. New York.——Lectures on Uterine Displacements. By B. Fordyce Barker, M. D., Professor of Midwifery and Diseases of Women in the New York Medical College.——Statistics of Injuries of the Heart: Observations on Wounds of the Heart, and their relations to Forensic Medicine, with a table of forty-two recorded cases. By Samuel S. Purple, M. D., etc., etc.——Rushton's Treatise on Cod Liver Oil, giving its curative properties and uses in various diseases.——Introductory Lecture, to the Third Annual Course of the Metropolitan Medical College. By Henry A. Archer, M. D.——The Address, delivered at the Commencement of the Savannah Medical College, March 13th, 1855. By Henry

Williams, Esq.—Together with a large number of Catalogues and Circulars.

The Atlanta Medical and Surgical Journal.—The first number of this Journal will be issued on the 1st September next—edited by Professors Joseph P. Logan, M. D., and W. F. Westmoreland, M. D. Terms: $3 00 per annum. We wish the gentlemen much success in their very arduous enterprise.

Fleming's Hygienic Journal—to be published monthly, in Atlanta: edited by W. R. Fleming, M. D. Terms, $2 00 per annum. The first number will be issued on the 1st August. This Journal promises to be of much utility, not only to the Profession, but to the public generally. We hope the Editor's labors will be appreciated.

Continued Lactation of Children by Sick Mothers.—Alf. Mercier quotes the following cases:—In one instance, a mother sick of typhus fever continued to nurse her child, fourteen months old, without injuring it. In another case, a mother sick with yellow fever continued to nurse her child, eleven months old, also without bad effect.—*Presse Méd. de Paris.*

M. Guillot remarks, that a disease beginning in the last stages of gestation, or the first after confinement, is no indication for the interruption or discontinuance of nursing.—*Presse Méd. Belge.*—[*Amer. Med. Monthly.*

Formula for the Internal Use of Chloroform.—M. Dannecy, pharmacien at Bordeaux, recommends the following formula:—Pure chloroform, half a drachm; oil of sweet almonds, two drachms; gum arabic, one drachm; syrup of orange flowers, one ounce; distilled water, two ounces; mix the chloroform with the oil, and make an ordinary oily draught. The author also gives a very ready mode of testing the purity of chloroform. Mix the latter with some oil; if the chloroform be quite pure, the limpidity of the oil will not be destroyed; whereas, any chemical impurity, however small, will give rise to a cloud.—[*London Lancet.*

Calculus adherent to Bladder by means of a Needle. By J. Simon, Esq.—Mr. Simon, a few days ago, performed the operation of lithotomy on a boy about 6 years old. After removing the calculus, he felt something in the bladder, which, on removal, proved to be the head half of a needle. The other part of the needle was found in the calculus. Mr. Simon supposed that the needle had been introduced from the rectum, and that the portion which projected into the bladder had served as a nucleus for the calculus.

[*Association Med. Journal.*

A Remedy for Animal Parasites.—Our readers are probably aware that benzin or benzole is a clear, colourless fluid, possessed of a pungent ethereal odour, which is produced by the decomposition of benzoic acid, or other organic substances, at a light temperature. It was long ago ascertained by Milne Edwards, that its vapour was very fatal to insects. This property has led M. Reynal, of the veterinary school at Alfort, to employ it for the

treatment of pedicular maladies among animals. He has found that it destroys the parasites in these diseases, more surely, and with more safety to the animal, than tobacco-juice, mercurial ointment, or any other of the many remedies used. It destroys the epizoa without at all injuring the skin. It is proposed to use this fluid in the paracitical diseases of the human skin, especially in pityriasis, or morbus pedicularis, and in scabies.

[*Dublin Medical Press.*

Formulæ for Protosulphate of Iron in Erysipelas. By M. Debout.—M. Debout, in allusion to the local application of sulphate of iron in erysipelas, recommended by MM. Velpeau and Devergie, (see *Medical Times and Gazette* for March 10,) states that the following formulæ are of approved value:—

The Ointment.—Sulphate of iron,	5	to	10 parts.
Water,	12½	"	25 "
Oil,	12½	"	25 "
Lard,	70	"	40 "
	100	.	100

The Solution.—Sulphate of iron,	10	to	20	or	40 parts.
Water,	120	"	110	"	90 "
Glycerine,	70	"	70	"	70 "
	200		200		200

[*Bull. de Thérap. Lon. Med. Times and Gaz.*

A Radio-Ulnar Ligament lately discovered.—M. Denuce, in a thesis "on the luxations of the elbow-joint," lately published, mentions, among other things, that near the annular ligament, in which plays the head of the radius, he has, by his dissections, discovered another ligament of about four inches square, inserted, on the one side upon the neck of the radius, and on the other, upon the inferior margin of the lesser sigmoid cavity of the ulna. He calls it *ligamentum quadratum radio-ulnare;* it is supposed to limit the movements of pronation and supination.—[*London Lancet.*

Belladonna in Salivation.—A woman treated by mercury, internally and externally, for serous diarrhœa, was affected with profuse salivation. Dr. Erpenbeck treated this latter complaint with belladonna in divided doses, of two grains and a half, taken in emulsion every twenty-four hours. Next day the salivation had subsided, and the mouth was quite dry. On stopping the belladonna, the salivation returned, and again ceased when it was resumed.—[*Western Med. Journal.*

Hare-lip.—The "earliest operation for hare-lip is reported by Mr. Douglas in the London Lancet. He attended the mother in her labor. The child having single hare-lip he operated on it *two hours after birth*, using fine sewing needles instead of pins. The hemorrhage was trifling. The child was kept from the breast three days; on the fourth, the needles were removed, union by the first intention having ensued. He reasons thus on the propriety of early operation—"That infants bear much injury during birth without fatal results, and they can be made to fast three days after birth, the secretion of milk not occurring usually for that time."—[*Virginia Medical and Surgical Journal.*

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ORIGINAL AND ECLECTIC.

ARTICLE XXV.

A glance at the "Reply" of Silas Ames, M. D., to "Experiments with Phosphorus," &c. By Wm. M. Boling, M.D. (Abridged by the author, from the New Orleans Medical and Surgical Journal, for March and May, 1855.)

In the New Orleans Medical and Surgical Journal, for January, 1854, is a paper by Silas Ames, M. D., on Pneumonia, in which phosphorus, in a certain form and mode of administration, is spoken of as a remedy. In the May number following, of the same journal, are published some experiments by myself, with the article in question; and in the November number, is a Reply by Dr. Ames. (Republished in the Southern Med. and Surg. Journal, for April and May, 1855.) This reply is now under examination—in the course of which it may possibly be deemed proper, to revert to the paper on Pneumonia.

Doctor Ames commences by saying: "The experiments thus prompted, led Dr. Boling to three principal conclusions.

"First. That phosphorus is not a sedative.

"Second. That it is not a stimulant; and,

"Third. That it is not poisonous when given in an alcoholic solution."

These conclusions, though it perhaps might not be very unsafe to admit them, especially the first, *are not mine*, though so stated by Dr. Ames, who also says that they are "broadly expressed" in my paper; which, however, I cannot find to be the case. The first object of my experiments, it will be remembered, was to ascertain whether phosphorus, given in the form of alcoholic tincture, in

certain doses mentioned, and administered in a certain manner, was, as stated by Dr. Ames, a sedative. In the course of the experiments, it become an object to ascertain whether, second, the same article, administered in the same manner, and in *certain doses* also mentioned, was stimulant, indirectly however, and through a local irritant action upon the stomach. In regard to phosphorus in no other form than in that of the tinctures spoken of by Dr. Ames, and in *his doses,* administered as in his prescription, with water, did I feel myself called on to give an opinion; nor yet as to what might be its action when given in a form to secure the administration of a known definite dose, and one sufficient to produce an appreciable effect. In view, then, of the aim with which my experiments were instituted, had I deemed it proper to have "broadly expressed" the conclusions that I thought might fairly be deduced from them in the form of propositions, they would have been somthing like the following:

First. That the alcoholic tinctures of phosphorus, prepared as those used by Dr. Ames were, and administered in the manner spoken of by him, and in the doses in which they are asserted by him to be so, are not sedative.

Second. That the articles, so prepared and administered, are not stimulant, indirectly through a local irritant or poisonous action upon the stomach, in the doses in which it is asserted by Dr. Ames that they are so.

Third. That the alcoholic tinctures used by Dr. Ames, are not, probably, the best preparations of phosphorus, "by which to secure with any certainty its full and peculiar operation, whatever this may be, upon the system;" which latter proposition is stated in my former paper. This opinion is sustained by other, and high authority. In a note by A. Dechambre, of Paris, editor of the "Gazette Hebdomadaire de Médecine et de Chirurgie," to a translation of my paper on phosphorus, published in that journal, is the following remark—"Ce travail est important comme établissant à l'aide d'experiénces, ce que la chimie permet d'affirmer *à priori.* Le tinture alcoolique de phosphore est une *très mauvaise* préparation, *encore moins chargée* en principe actif que ne le suppose l'auteur lui même." But, to return:

The conclusions, then, not being mine, not made by myself, but by Dr. Ames for me, the examination might very legitimately be closed at this point; but it may not be uninteresting in a cursory manner to pursue the subject further.

Doctor Ames objects to my experiments with healthy subjects, on several grounds; among others, for the reason, as he says, that sufficient care was not taken to "avoid those normal causes influencing the state of the pulse, which being *common to all persons*, of whatever age, are *almost constantly in operation* during our waking hours." *Such* being the case, it would be a most difficult matter, even with reasonable care, to avoid the causes alluded to entirely, nor does it seem probable that they could have been in all of my experiments, more actively in operation, than in those of Dr. Ames. Indeed, on the contrary, it would seem probable that the disturbing causes were less numerous in some of my experiments, than in his. We are not informed, at least, by Dr. Ames, what were the precautions taken by himself to avoid the causes, influencing the state of the pulse, so constantly, as he says, in operation; and with the sick especially, so calculated to lead to doubtful, or possibly even erroneous conclusions.

Doctor Ames further objects because, as he concludes, there was influencing my subjects, some "other cause" than those just alluded to, "operating more powerfully to disturb the pulse." It would be curious if such were in reality the case; that both of the subjects selected, should have thus been operated on by some mysterious influence, escaping my observation, different from the influences generally in operation upon others. Possibly it was so; and without the evidence of a series of experiments upon other subjects, exhibiting the condition of the pulse at different intervals, I would not be willing to give a positive opinion to the contrary; while in the absence of any such series of experiments, one could scarcely be certain of being right, in giving a positive opinion in the affirmative.

This objection of Dr. Ames, it is proper to state, is based upon certain variations in the pulse in my subjects at different intervals, from unobserved or apparently inappreciable causes. Dr. Ames does not refer to any authority or experiments to show that the variations of the pulse to which he objects are unusual, but merely remarks that physiologists are "universally silent" as to such changes. His affirmative conclusion, therefore, would seem to be deduced from a negative premiss. In referring to an instance in which the pulse was found quicker at one time, than it had been at an earlier hour in the day, Dr. Ames says: "we find the usual order of the diurnal change reversed, the pulse increasing in frequency, instead of diminishing, as the day advanced."

The time of counting the pulse last, was during the digestion, as was evident from the report, of a hearty dinner, which may possibly have had something to do, it would be but reasonable to suppose, with its accumulation at the moment. Professed physiologists, however, are by no means unanimous as to this "usual order of the diurnal change," referred to by Dr. Ames; and with the reversal of which he is so much dissatisfied. On the contrary, M. Rochoux, (Dic. de Med.) speaking of the pulse, says, "En général sa fréquence augmente graduellement du matin au soir." So, too, Dr. Bostock, referring to certain experiments upon the pulse, says: "we are however, scarcely able to draw any conclusion from them, except that the pulse is *less* frequent in the morning, and that it has a general disposition to become *more* frequent, as the day advances." In certain experiments performed by Dr. J. M. B. Harden, of Georgia, the pulse was generally found to be more frequent in the afternoon, than late in the evening, at night, or in the morning. Now, the hour at which the pulse of my subject was felt last and found more frequent than at a previous counting, and from which Dr. Ames says the "usual order of the diurnal change was reversed" was 4 o'clock, P. M. The average range of the pulse in Dr. Harden's experiments was, at 7 a. m., 64, and at 3 p. m., 79. It would seem, then, that not in my subject, but in the imagination of Dr. Ames, was the "usual order of the diurnal change reversed," and in view of some of the opinions held by him, in regard to the manner in which the pulse should act, it would not by others, probably, be regarded as at all strange, if at times he should meet with the record of examples in which it did not act in accordance with them, or to suit his fancy.

Though there are but few experiments that I can find on record, calculated to elucidate the question, physiologists, it appears, are *not* "universally silent" as to very much such changes in the pulse, in persons in health, as were objected to in my subjects by Dr. Ames. In the experiments of Dr. Harden, very considerable variations from what would be regarded as its average or more common standard, are to be found. On the 8th of November, the subject being recumbent, the pulse is, at 7 a. m., 60; at 1 p. m., 65; at 3 p. m., 72; at 7 p. m., 64; at 11 p. m., 54. On the 9th, at 7 a m., 58; at 1 p. m., 70; at 3 p. m., 80; at 11 p. m., 60. On the 16th, at 7 a. m., 60; at 1 p. m., 72; at 3 p. m., 70; at 7 p. m., 60; at 11 p. m., 54;. Neither, in all cases, are the usual appreciable disturbing influences found to produce the variations that might

be expected. Thus, while at 1 p. m., on the 7th, the pulse is at 64; after a ride of 10 miles, at the same hour on the 9th, it is at 70, the subject having been at rest. While at 3 p. m., of the 4th, after an ordinary dinner, the pulse is 87, on the 2d, at the same hour, under apparently similar circumstances, it is 72, and on the 15th, at the same hour, 68. At 7 p. m., on the 7th, the pulse is 72; at the same hour on the 8th, it is 64. At 3 p. m., of the 8th, it is 72; at the same hour on the 9th, it is 80. The want of accordance, too, in the relative frequency of the pulse, as felt at different times in these experiments, in the different positions, is very considerable, and indicative in itself, of variations, from trivial or inappreciable causes. Thus, while on the 3d, at 7 a. m., the pulse is 60 lying, 60 sitting and 68 standing; on the following day, at the same hour, it is, in the different positions, 60, 68, and 80. While at 7 a. m., on the 4th, it is 59 lying and 71 sitting; at 3 p. m., of the 10th, it is 74 lying and 72 sitting. While at 11 p. m., on the 15th, it is 54 lying and 68 standing; on the 16th, at the same hour, it is 54 lying and 58 standing. While at 7 p. m., of the 16th, it is 60 lying and 70 standing; at the same hour on the 15th, it is 60 lying and 80 standing.

As the indications of the presence of this "other cause," whatever Dr. Ames may have supposed it to be, appear to be about the same in these experiments of Dr. Harden, as in my own, and as there is no little probability that any such mysterious influence should have been present, in the circumstances under which they were made, the influence naturally arises, that the thing is altogether a suggestion of the Doctor's own imagination—a creature of his fancy—having otherwise no real existence.

Dr. Ames seems to think it very strange that, on one occasion in my experiments, when the boy Sam took 500 drops of alcohol, his pulse, counted an hour and a half after, was not found to be increased in frequency. According to the *experience* of Dr. Ames, if *very* large doses of quinine—larger even than may be necessary, when given in disease, to reduce the frequency of the pulse twenty, forty, or even fifty beats in the minute—be given in health, "it may be that the pulse will not be affected at all, and is just as likely to be made faster as slower." Now, if the pulse may present such very eccentric variations, as a general thing, under and from the action of a remedy so powerful as quinine, as it would appear from the result of Dr. Ames' experience with the article that it does; *sometimes not varying at all, sometimes rising and sometimes*

falling under its influence, without the presence of this "other cause," may we not suppose it equally possible, that, as an occasional thing, or in a solitary instance, a moderate dose of a stimulant remedy might fail to be followed by an accelerated action of the heart.

In instituting my experiments on phosphorus, it was my wish to ascertain whether the action of the article as recommended by Dr. Ames, was sedative, as he states it to be, or not, and I conducted them, as seemed to me at the time, in such a way as was likely to bring the matter to a fair test. On one point I was careful; to wit: that the circumstances should be as near as possible the same, when the experiments with and without the phosphorus were made —the administration of the latter excepted—and in some of them, if not all, it will not be doubted, I think, that the causes referred to, were as certainly and as effectually avoided, as it is probable they were or could have been, in the experiments of Dr. Ames. If the sources of fallacy are at times difficult to avoid in experiments on the healthy subject, the sources of doubt must be more numerous and much more difficult to avoid in the sick, laboring under violent acute disease, where the real antecedents of any change are often so uncertain. Here, in addition to most of the disturbing influences in action upon the healthy subject, there are many others—and important ones—in operation, calculated to lead to doubt. On this account, experiments upon the healthy subject, where some of these disturbing influences may be avoided, have been regarded as a legitimate means, not always conclusive, of course, of confirmation or contradiction in regard to the supposed operation of articles of the materia medica—of new ones more especially. Such experiments are of course more necessary, and of more value and importance, in regard to articles, whose influence upon the system is not manifested by any very striking or characteristic indications, such as will make the presence of their operation observable above, and as it were, in spite of other disturbing influences; and in some parts, at least, of Dr. Ames last paper, we are led to think, even as he views them, the evidences of the operation of his remedy, are neither very striking, conspicuous, nor characteristic.

Doctor Ames speaks of phosphorus as a sedative, but he gave it, in his experiments, in conjunction with quinine and aconite, two very powerful sedatives, under the operation of which, the influence of another sedative agent, unless of extraordinary power,

would certainly not be very apparent, while a part of the influence of the former might very readily be ascribed, in mistake, to the latter, especially by an observer prepossessed with the belief that this was curative, and through a sedative action. He speaks, too, of its producing considerable disturbance of the stomach, shown by "nausea or vomiting, burning heat and a feeling of oppression at the epigastrium," &c.; which symptoms, as a result of his remedy, would be easily appreciable under other circumstances, but less readily in experiments such as he made with it, which were mainly in a disease in which the symptoms enumerated are frequently present; the article being given, too, in conjunction with another remedy—aconite—well calculated to develope several of them, even when not already existing. How, with certainty, then, discriminate between the "nausea or vomiting," &c, supposed to be produced by the phosphorus, and the same as produced by the other agents given in conjunction with it, or as occurring in connection with or growing out of the disease itself? or be certain that the part attributed to it, might not belong to other causes? To determine a question thus rendered doubtful, it would, of course, greatly aid to administer the remedy under circumstances in which the causes of doubt should be as much as possible avoided; for instance, as in my experiments, to the well. That no such results as those attributed to phosphorus by Dr. Ames, follow its use, even in doses so much larger than those used by him, where the other probable causes of the symptoms mentioned, are not in operation in conjunction with it, shows, it would seem very clearly, that they had their origin under other influences, and that, erroneously, they were ascribed to it.

In the paper of Dr. Ames, on Pneumonia, his estimate was, that the quantity of phosphorus held in solution to the ounce of his *mother* tincture, was about four grains. In the course of my experiments in the administration of phosphorus, I instituted also some experiments with it, with the view of testing its solubility in alcohol. From these I arrived at the conclusion, that the quantity held in solution in an ounce of the saturated tincture was about one grain; which would make the dose recommended by Dr. Ames, about the one-sixteen-thousandth part of a grain; supposing the patient to receive at the time of administration, the full amount of phosphous contained in the alcohol before its combination with the water, which, however, there is good reason to believe, is never the case. In his reply, Dr. Ames gives the particulars of

some experiments performed at his suggestion, from which he arrives at the conclusion that his saturated tincture contains about six grains to the ounce; which would make his dose, somewhere between the one-two-thousandth and the one-three-thousandth part of a grain, but nearer the latter than the former—certainly not itself a very formidable looking quantity—instead of the one-sixteen-thousandth, at which I had estimated it.

The plan adopted in these experiments by Dr. Ames, was *different* from that pursued in the preparation of the tincture used by him prior to the publication of his paper on Pneumonia, and was as follows: a given, known quantity, of phosphorus, previously reduced to powder, by the process of Leroy, was placed in several vials, containing each an ounce of anhydrous alcohol, and after being *digested* for some time, the portion remaining in each was again weighed, and the quantity held in solution, estimated by the loss. The experiments were performed during the summer season.

There was an obvious, and indeed, as performed, unavoidable source of fallacy in the experiments of Doctor Ames, growing out of the impossibility of estimating precisely the loss in weighing the powder after digestion; the weight being modified or affected by the degree of moisture, as also by the quality of the fluid—alcohol or water—with which it might be moistened, the loss by combustion &c.; for it would be very difficult to collect and weigh all the remaining powder in a dry state, owing to its combustibility, especially in the heat of summer. Indeed, the inequality of the results in the different experiments of Dr. Ames, would seem conclusive as to the inaccuracy of the process.

Satisfactory and conclusive as to me were my previously performed experiments, on the appearance of the reply of Dr. Ames, I had some others made—among them the following—and as it will be seen, in such a manner as to secure any advantages the process he adopted could possibly have, with the avoidance of the several sources of fallacy, necessarily pertaining to it. The alcohol used, which I had considerable difficulty in procuring of such purity, on being tested, was found of sp. gr. 794, at 60° F.

On the 19th of November, one grain of phosphorus was placed in a vial, which was afterwards carefully sealed, containing a fluid ounce of this alcohol. It was then carefully digested several hours in a water-bath, the temperature of which varied during the time, from 110° to 150° F., till the *solution was complete*, and then set aside to cool. On examination, a day or two after, a very apprecia-

ble quantity of phosphorus was found precipitated in the form of a granulated powder.

This, I think, cannot be regarded otherwise than as conclusive, that the saturated tincture does not contain or hold in solution, a grain to the ounce, during our usual fall and winter weather. A portion perhaps of all of the precipitate mentioned, it is but reasonable to suppose, may be redissolved during the warm weather of the coming summer, but again precipitated in the fall; the quantity held in solution, depending greatly, of course, upon the temperature. *But, viewing the matter as connected with the treatment of Pneumonia, which is a disease of the winter rather than of the summer season*, the strength of Dr. Ames' saturated tincture should be estimated, not by the quantity of phosphorus that may be dissolved in the alcohol by *digestion* or held in solution during the heat of summer, but by the quantity that it will hold in solution during the winter season. The estimate made in my former paper, as to the quantity of phosphorus, as regards the purpose in view, contained in the ounce of the saturated tincture, then, to-wit, one grain, from which it follows that Dr. Ames' medicinal dose is the one-sixteen-thousandth of a grain, is not too low.

The experiment given, enables us, none I think will doubt, to estimate with as much accuracy as the subject is susceptible of, the size of Dr. Ames' medicinal dose; unless we could also fall upon some method of ascertaining with precision the quantity lost by evaporation, in the combination of the tincture with water preparatory to its administration; when, possibly, it would be discovered that it was reduced to about—nothing.

Dr. Ames tells us that prior to the publication of his paper on Pneumonia, he had not made the size of his dose a subject of inquiry. This, even without such an avowal, is the conclusion that would probably strike almost every person at once, on making an estimate of his dose; and with many, if not all, it would be difficult to resist the impression that, had he made it a subject of inquiry before the publication of his paper, he might have been thereby led to hesitate—to hold back awhile—to make further investigations and variations of his experiments; among other things, perhaps, to have made trial of his dose upon the healthy subject, where the possibility of mistaking phenomena connected with the disease, or resulting from the operation of other remedies, for the effects of the phosphorus, might be avoided; and in the event of his so doing, also, that he might have been led to such a modifi-

cation of his opinions relative to his remedy and its dose, as would have prevented the promulgation of the "new medical fact."

It would be difficult, I think, after a perusal of the details of my experiments, notwithstanding the ingenuity of Dr. Ames' objections to them, to resist the impression that phosphorus, as administered by him, is not a sedative; and in the Reply he tells us that he never said it was much of a sedative. Let us see how this compares with the tenor of what is said on the subject, in his paper on Pneumonia; first however, presenting what he says in his Reply on the subject, in his own language.

"By referring to my paper on pneumonia," he says, "it will be found that I have never spoken of phosphorus as an active sedative agent over the action of the heart. In all that is there said of the *dose* of phosphorus, no mention is made even of its sedative powers; and this it may be seen, is in striking contrast with what is said of the saturated tincture of aconite, in speaking of the dose of that article. As regards the latter, a great deal of pains was taken to point out that its remedial and poisonous action was the same, namely, *sedative*, and that on this account great caution was required in giving it." He further says, that his references to it as a sedative, were made, in attempting to account for its curative action, and that its sedative is spoken of only in connection with its medicinal action, which is contrasted with its *poisonous* action, which is *not* sedative.

Now, in the present discussion, it could scarcely be deemed a material point, whether the sedative action ascribed to phosphorus, was spoken of by Dr. Ames in connection with the *dose* or not; though he certainly placed it under its more appropriate head, in treating of it while engaged in his explanation of the *modus operandi* of the article. Dr. Ames tells us that he took a great deal of pains to point out that the remedial and poisonous actions of aconite were the same, to-wit, sedative, "and that on this account great caution was required in giving it." Well, he certainly took as much pains to point out that the remedial and poisonous actions of phosphorus were *not* the same; in fact, that they were "antagonistic;" the one being sedative—the other, indirectly stimulant, in consequence of a local irritant action upon the stomach; "and that on this account great caution was required in giving it." But surely there is no proof in all this presented, that he did not attribute to it a decided sedative action. The latter he did not speak of as dangerous to be sure, because it was limited by the former. Thus: "Its *sedative*

or contra-stimulant, is its medicinal or therapeutic effect. Its *poisonous* effect is the reverse of this, namely, *highly* stimulant *by reason* of the local inflammation it excites. In *this* way is brought about the *antagonism* between its effects in large and small doses."

Its medicinal or therapeutic effect, Dr. Ames seems to think, is very considerable—a great remedy, "equalled by but one other" in pneumonia—and this is its *sedative* effect, which, *ergo*, it follows as a matter of course, he must also regard, as very considerable. Again—"There is *a point* at which it *ceases* to be medicinal or *sedative*, and becomes poisonous or *stimulant*. *Thus*, it is not possible to produce by it, the *extreme* depression which follows large doses of aconite, for when the dose *is enlarged for this purpose* beyond a certain point, a new and opposite action is *immediately* set up, by which the power is lost." "Unlike most other therapeutic agents, its medicinal and its toxicological actions are in a *certain degree* of the development of the latter, *antagonistic*, so that in *proportion* as its toxicological powers are brought into exercise, so are its medicinal virtues diminished, and *thus* it is found that its curative effect is not in the *ratio* of the quantity administered."

That the sedative action of phosphorus, as he claims, was not represented by Dr. Ames, as existing to a poisonous extent, is most surely the case; but for the very good reason that, according to his explanation of the various effects of the article, and its *modus operandi*, a stimulant or poisonous action, counteracting the sedative action, would be developed before the dangerous point of sedation could be reached, owing to the very prompt and powerful local irritant influence upon the stomach, should the dose necessary to produce the proper manifestation of its sedative action be moderately exceeded. It would be impossible, therefore, to sink or be lost in the yawning *charybdis* of sedation, because the scylla of stimulation, growing out of the local irritant influence upon the stomach and bowels, was always rearing its destructive breakers in the way. But the inference from the remarks of Dr. Ames, presented fairly, is, that were it possible to so administer it as to avoid this irritant action upon the stomach in large doses, or if in any case, from any cause whatever, such action might fail to occur, the dose being carried beyond the limit of its medicinal sedative operation, then, under the above explanation, what terrible depression might we not anticipate! Did any such operation pertain to the remedy, it ought, of course, to proceed to a poisonous extent, whenever—it being exhibited in large doses—this counter-

acting effect failed to be developed; and in degree proportionate with the augmentation of the dose, up to such point. If but moderately manifested under a dose of half a drop, it ought surely to be very sensibly developed under doses, in this quantity several hundred times multiplied. But not only in my experiments—though the counteracting or "antagonistic" influence was not developed, did it fail to manifest a sedative action in any poisonous degree, but it also failed to manifest any such effect, even to a degree that might be regarded as medicinal, or *any* effect of any kind at all.

Dr. Ames, however, in his Reply, admits in one place, that in his paper on Pneumonia, he did speak of "its sedative influence over the *general* circulation;" but a prior remark would lead to the inference, that he did not mean to say it had any such action, in a degree sufficient to overcome "any of the ordinary physiological influences over the pulse;" which it surely seems, is about equivalent to saying that it *was* a sedative, and that it was *not* a sedative.

Can a medicine, with propriety, be said to have a peculiar operation, (say, for instance, as a sedative, or as a cathartic, or as an emetic,) in any given case or condition, otherwise, or for other reasons, than because it may be capable of overcoming the ordinary physiological influences resisting such operation, in the case or condition specified? Is it not mainly, at least, in virtue of such special powers, that medicines are classified? Is not the possession of such powers implied in the definitions in any classification founded upon the effects of medicines upon the system? Professor Giacomini, speaking of the class, thus defines sedatives or contra-stimulants. "Nous regardons comme hyposthénisantes toutes les substances qui, introduites dans l'assimilation organiqūe, changent tellement l'organisme vivant que la force vitale reste abaissée au-dessous du rythme normal du degré où elle était avant leur application." And of stimulants: "Nous apelons hypersthénisantes toutes les substances qui étant introduites dans l'assimilation de nos tissus, changent tellement la manière d'être de l'organisme vivant, que la force vitale s'élève au-dessus du rythme normal ou du degré où elle était."

Suppose, for instance, one should at one time say that a specified article was a cathartic in doses named, which, on repeated trial, failed, not only in such doses, but in much larger ones, to have any such effect; and on being reminded of it should answer—"Ah,

yes, I did say say it was a cathartic, but I never said it was capable of overcoming *any* of the ordinary physiological influences resisting a cathartic action;" and what would be the legitimate inference? That it was said to be a cathartic, or that it was asserted, that it was not a cathartic?

But let Dr. Ames speak for himself, that we may see what he really does say in his paper on Pneumonia, in regard to the sedative operation of phosphorus. Speaking of a class of remedies, useful in inflammation, combining the properties of a "*sedative* to the heart's action, and a stimulant to the contractile force of the capillaries," he says—"*Phosphorus* is put in the class, solely because of my own experience, and that of a few others, of its *immediate sedative or contra-stimulant* influence on the *general circulation*, when given in a dose large enough to produce any sensible influence of any kind on the action of the heart, but still not large enough to excite inflammation or a high state of irritation of the stomach and bowels. Its sedative or contra-stimulant, is its medicinal or therapeutic effect."

Indeed, on examining the paper of Dr. Ames on Pneumonia, it will be found, I think, impossible to arrive at any other conclusion, than that his "new medical fact," consists mainly, if not exclusively, in this announcement of a sedative action of phosphorus over the heart. Repeatedly its operation as a cardiac sedative is spoken of, and the idea is presented and conveyed in different pointed remarks, strengthened by incidental allusions, that the limitation of its action in this direction is found in its *secondary or indirect* operation as a stimulant; and such an inference, so far as I can discover, is *not* contradicted by a single assertion or intimation to the contrary. The idea is not incidentally, merely, it will be seen, presented in a single instance, or in such a way as to admit of explanation by the supposition of an oversight; but the assertion is repeatedly made in various shapes, distinctly stated, and emphatically dwelt upon.

"My opinion," says Dr. Ames in his Reply, "of the extent and *kind of sedative* power it exerts in disease is expressed in the following extract," made from his paper on pneumonia, "its action on the lungs seems, from its effects, to be especially directed to the minute bronchial tubes and the air cells; and in inflammation, to the *capillary vessels*, rather than to the heart."

Let us examine, then, his views, as given in full in his paper on Pneumonia, in regard to the nature of this action on the "capillary vessels," that if possible, we may ascertain precisely the "*kind* of

sedative power" to which he refers. In pursuance of this object, it will be necessary to notice certain opinions presented by Dr. Ames in the paper just mentioned, in regard to the mode of the curative action of remedies in inflammation. While abbreviating, nothing essential to the full development of his views will be omitted. He says:

"It is well known that under certain circumstances, the remedies for inflammation are required to be of a stimulating nature. * * * * * The pathology of inflammation explains this seeming paradox. The phenomena of inflammation are now known to be derived from an engorgement, or 'repletion in excess' of the capillary vessels carrying blood; the repletion being itself dependent on a deficiency in the organic contractile force, which in health propels the blood, in part at least, through the vessels."

According to this view of the proximate cause of inflammation, he continues, "the remedies for it ought to be *stimulants*, at least, in their *local* action on the part inflamed." This would be true, he goes on, "of all remedies for inflammation, if the organic force of the capillary vessels were the only force concerned in circulating the blood." In view, however, of the part which the contractile action of the heart performs in it, some active and efficient remedies for inflammation are on the list, which are in no sense stimulant, and which act exclusively by reducing the injecting force of the heart. These are the pure sedatives, and blood-letting is the best representative of the class. Leaving these out of consideration, because their action is *indirect*, he proceeds to divide the other remedies for inflammation into three classes. The first are the diffusible stimulants, and alcohol is the best representative of the class. "They are applicable only in those states of the system, where *local* inflammation co-exists with a depression of vital powers, a deficient action of the heart and of the nervous force of the capillaries."

Those of the second class, stimulate the nervous system generally, and through it the heart's action also, but moderately, but at the same time have an especial action on the organic force of the capillaries; the latter more than compensating for the slight additional injecting force of the heart imparted by them.

"The third and last class consists of such medicines as combine the properties of a *sedative* to the heart's action, and a *stimulant* to the contractile force of the capillaries;" and in this class, Dr. Ames places aconite, antimony, *phosphorus* and quinine.

The action which, according to Dr. Ames, phosphorus exerts upon the "capillary vessels," has here been traced out, and the "kind of *sedative* power it exerts in disease," as thus ascertained, discovered to be a *stimulant* power. Truly, the Doctor seems, in this affair, to have very curiously and amusingly involved himself in his own subtleties.

Dr. Ames speaks of the "facility of doing mischief" with his preparations, and, alluding to his doses, tells us that the evil of developing the poisonous influence of the remedy, "can hardly be avoided, in giving it in much larger ones" than those which he recommends. After also stating that, in his doses of half a drop even of the diluted tincture, it "occasionally produces some very sensible effects upon the head and stomach," he further remarks, alluding to doses of from half a drop to two drops of the saturated tincture, that it "cannot be continued in the smallest quantity just mentioned, for any great length of time, without inducing considerable disturbance of the stomach, shown by nausea or vomiting, burning heat, and a feeling of oppression at the epigastrium—and that in the larger quantities, though a *single* dose, or *perhaps a few* doses may be given with impunity, it cannot be continued for any great length of time with ordinary, or at least a proper exercise of prudence."

The consequences of the dose of two drops, given oftener than "a single dose, or perhaps a few doses," must have seemed awful, indeed, to Dr. Ames, and, as if language would fail to convey a sufficiently vivid picture of the terrible mischief, and words were inadequate to its portrayal, he leaves the task to the imaginations of his readers, after leading them on to the highest state of excited expectation. He tells us, first, that the medicine cannot be continued in doses of half a drop for any great length of time without inducing considerable disturbance of the stomach, as shown by certain symptoms enumerated, and then, that in the larger quantity of two drops, though a single dose, or perhaps a few doses, may be given with impunity, it cannot be continued any great length of time with "ordinary, or at least a proper exercise of prudence." He had already told us, that the doses of half a drop could not be continued any great length of time without inducing considerable disturbance of the stomach, shown by "*nausea or vomiting, burning heat and, a feeling of oppression* at the epigastrium;" which being the case, *they* even, of course, could not be so continued, "with ordinary, or at least a proper exercise of prudence." What, then,

must be the dreadful consequences, which we are thus left to imagine, of the two drop doses, so continued?

After remarking thus far upon the necessary and uniform poisonous action of his remedy, given as explained, Dr. Ames goes on to speak of its *other* qualities as a poison. "So far in regard to *activity merely;* but in estimating the proper dose, several *other* things are required to be taken into consideration, having reference to certain *peculiarities* of its operation. *First,* the *eccentricity* of its action as a poison." * * * * * "*Secondly,* its effects are cumulative;" and, in the *third* place, the *antagonism,* already referred to, between its medicinal and toxicological operation, is mentioned.

To this extent it has been deemed proper to present the opinions of Dr. Ames, both in regard to the sedative or therapeutic, and the stimulant or poisonous action of phosporus, as preliminary to a notice of his arguments against the inferences that appear fairly deducible from my experiments, and which I here present, in shape somewhat different, but in substance the same as formerly given.

First. That not only no sedative effect, but *no* appreciable effect of *any* kind being produced upon the healthy subjects, by the tincture of phosphorus given in doses many hundred times as large as those in which Dr. Ames says that in disease it produces a therapeutic or sedative, and other "very sensible effects," it is more probable that he was deceived, than that it does, given as he gave it, produce any sedative action.

Second. That not only no such poisonous action as is said by Dr. Ames, to follow its use in doses mentioned by him, when given to the sick, nor any appreciable effect of *any* kind resulting from its administration to the healthy subject, in doses many hundred times larger than his were, it is more probable that he was deceived than that it rarely does, giving as he gave it, produce such poisonous effects.

The third, it is unnecessary to repeat.

It is regarded, I think, as a settled point by the profession, that, as a general rule, the effects of remedies of an active character, and more especially of poisons, are of the same nature in health as in disease; and in experiments in the former state, the actual or positive powers of medicinal agents can generally be ascertained correctly. In such experiments, too, the confusion and want of certainty, necessarily arising from the mingling of the symptoms

of disease, or such as are produced by other remedies with those produced by the medicine under experiment, are avoided; while in experiments upon the sick, in which a number of remedies may be administered at the same time, the actual or positive power of any *one* particular medicine, can rarely with certainty be estimated or distinguished. The medicine that will purge or vomit, or that will depress or exalt the vital actions in disease will be likely to do the same in health; and the article that will poison a sick man, with but a moderate augmentation of the dose—at least as compared to the difference between the medicinal dose of Dr. Ames, and the doses given by myself—will surely poison a well one.

It is true that the susceptibility to the influence of certain remedies, is in some instances modified by disease. In some cases, the susceptibility to the influence of a particular remedy, is exalted by the morbid state, so that the impression of a given dose will be more marked than it would be in health. On the other hand, particular morbid states equally also diminish the susceptibility of the system to the action of certain remedies, and larger doses will be tolerated than in health. It is true, also, that in some instances the manifest effects of certain remedies upon the system, are not precisely the same in health and disease. But there is no example, that I can call to mind, of a remedy which, as a general rule, will produce *marked and appreciable effects in disease, and a prompt curative influence in acute disease in a particular dose, and yet not only not manifest any of the peculiar effects said to result from its action in disease, when given to the healthy subject, even in its, so-called, medicinal dose several thousand times multiplied, but no effect whatever.*

Let us test the reasonableness and probability of such a proposition in regard to phosphorus, by calling to mind the result that would follow the use upon the healthy subject, of any other active and dangerous article of the materia medica, in the smallest dose in which it will produce any "very sensible effects" in disease augmented in any thing like the position in which my doses of Dr. Ame's tinctures of phosphorus given to the healthy subject, were augmented above his medicinal dose.

One drop, or perhaps half a drop—say even a quarter of a drop—of the dilute hydrocyanic acid, is about the smallest dose capable of producing an appreciable, though not "very sensible effect" upon an adult subject, laboring under disease. Now, what would

be the inevitable consequence of a dose of this article to the healthy subject, in the above small dose, even but several hundred, to say nothng of one several thousand times multiplied? Dr. Ames tells us that a child six or eight months old, can generally take one-fourth of a drop, every third or fourth hour, of a well made saturated tincture of aconite, prepared from root of good quality, without inconvenience. This is, perhaps, the smallest dose—though let us reduce it to the eighth of a drop—with which any very sensible effects, it is probable, could be produced upon a subject of the age mentioned. But let us multiply this dose, say four hundred times, instead of four thousand times, and what would be the fate of the healthy infant that might take it? Death, of course, instantaneous and inevitable.

It will be remembered that in my experiments with the tinctures of phosphorus, published in the May number for 1854 of the New Orleans Medical and Surgical Journal, I administered on several occasions to different subjects, doses from one to four thousand times as large (and Dr. Baldwin has given much larger ones still) as Dr. Ames' medicinal dose, from which he says he has seen produced, when given to the sick, "very sensible effects upon the head and stomach," and—my subjects *survived.* Not only were they not instantaneously destroyed, but no "sensible effects" whatever, were manifested.

Even from the smallest dose, capable of producing an appreciable effect and a prompt curative influence in acute disease, of remedies not regarded as among the more dangerous, so multiplied and given to the healthy subject, surely there would result a very manifest effect.

Dr. Ames, speaking in another place of his dose—a half a drop of the diluted tincture—says, "it is large enough for ordinary purposes in the treatment of pneumonia, while it is not *too large to be perfectly safe.*" He further, however, tells us, that another physician—one of course who had had some *experience* with it—told him he "doubted the propriety of giving it even in this dose, in cases where there is a gastric complication." Now, in view of the frequency of gastric complications in pneumonia, as met with in the South, in connection with the assertion of Dr. Ames that his dose is "*not* too large to be perfectly safe" in this affection, consistently, of course, he cannot regard the "experience" of his friend, directly opposed to his own, and according to which his "perfectly safe" dose, is *not* perfectly safe, as of any value. It is

really difficult, too, to reconcile the confidence of Dr. Ames in the perfect safety of his dose in pneumonia, with other statements made by him in regard to his remedy. Thus he speaks of "the *peculiar activity* of its *physiological* manifestations, in a *much more minute* quantity than is contained in" the dose that he recommends, to-wit, a half a drop of the diluted tincture. It is fairly presumable, that in speaking of its "physiological manifestations," he has reference to its action upon the *healthy* subject. Now, in pneumonia, Dr. Ames tells us, the susceptibility to the poisonous action of his remedy is generally exalted. How, then, can he feel such confidence in the perfect safety of his dose in this affection, such being the case, consistently with his *experience* of the "*peculiar activity* of its physiological manifestations in a *much more minute quantity*," under circumstances where, of course, this exaltation of the susceptibility to its action could not exist?

Dr. Ames, after remarking on what he terms fallacies in my experiments, takes up the first conclusion, as deduced and presented for me, and says: "the influence" (that phosphorus as given by himself, does not act as a sedative in disease) "is fallacious, because there is no necessary connection between it, and the facts on which it is based. It might be true that phosphorus is not a sedative in health, and yet it might be true that it is a sedative in disease. Medical experience has furnished innumerable examples of the general truth, that negative facts concerning the physiological effects of a medicinal agent, afford no reliable proof as to its therapeutic action."

But, does medical experience furnish any example of a medicine which will produce prompt therapeutic and poisonous effects in disease, in doses many hundred times smaller than doses in which it will produce no appreciable effect whatever in health?

"The rule"—continues Dr. Ames—"is reversed as regards positive facts observed in the same way. If, for instance, phosphorus had proved to be sedative in these experiments, then the conclusion would have been legitimate and proper that it is also sedative in disease, and this without any other proof. And why?"

Now, it really does seem difficult to understand how the conclusion could be less legitimate and proper, that because a particular article in a given dose, is without effect on the healthy subject, therefore it is not sedative in disease, and more especially in comparatively minute doses, than that because it was sedative in heaith, therefore it must be sedative in disease. In the one in-

stance, neither less nor more than in the other, the influence as to the probable effect in disease, would be deduced from the apparent effect or want of effect, which amounts to the same thing under the circumstances, in health. After the above interrogatory, Dr. Ames proceeds:

"Solely in virtue that experience has long ago established the general truth of such inferences from positive facts—the law, however, being subject to many exceptions—that the manifest effects of a medicinal agent are generally shown in disease as in health."

Tell me, would the complete failure of an article to produce *any* effect be less a "positive fact," as regards the legitimacy of deduction, than the operation of another in a particular manner? Dr. Ames continues:

"But no such law applies to negative facts, and hence it is, that while in the one case the experience of medical men has furnished before hand the necessary experimental evidence to establish the truth in many instances of such an inference from positive facts; such an inference from negative facts, lacking this stored up proof, requires to be supported by an especial and direct experimental proof, in every instance. In the one case, the facts indicate a certain truth; in the other but a probable one, at least. To establish the latter, it is required that the indications from the facts obtained in experiments on well persons, shall be verified by experiments on sick ones."

Now, fancy one attempting to establish the truth in this instance, by verifying the *indication* which was a nullity, from my experiments on the healthy subject, by experiments upon the sick, and that, too, by giving doses several thousand times smaller than the doses with which this "indication" was obtained. While no one surely could doubt the result—the certainty of the *verification*—and while but few could be found who would not regard it as an unnecessary waste of time to assure one's self, that a negative result thus obtained, would be verified by the test proposed; where is he, even though endowed with all the sober gravity and solemn dignity of the Great Mogul himself, who could resist a smile on witnessing the process?

As in my experiments there were no positive effects developed, the absence or nullity of effect, may, for all practical purposes, be regarded in this instance as the "manifest effect;" indeed we are reduced to the necessity of adopting it as such. This being the case, by the law laid down by Dr. Ames, himself, liable as he

states to exceptions, but without exception it is probable, in instances precisely parallel to the present, "that the manifest effects of a medicinal agent are equally shown in disease as in health," we are necessarily brought to the conclusion at which I had already arrived, to-wit: that his doses of phosphorus were without manifest effect, on the diseased subject. The inference, then, appears quite legitimate, according to Dr. Ames' own logic, from the *want* of effect in health, to the *want* of effect (and à fortiori, in comparatively minute doses) in disease.

Dr. Ames tells us that instances "in which it is shown that decided, and even powerful curative effects, are brought about by the aid of medicines, which have either no *poisonous* action at all on well persons, or are given in doses too small to affect them sensibly, or in which the curative action is apparently the very opposite of their sensible physiological action, are equally numerous and familiar."

Now, the most of this quotation may be readily admitted, or rather, allowed to pass without a strict examination, as it has but little bearing on, or relevancy to the question. That it should have, or to be fairly appropriate and parallel, instead of reading, "no poisonous action &c., on well persons," it should read—"instances are equally numerous and familiar in which decided prompt and even powerful curative, as also without great care, very appreciable poisonous effects are brought about by the aid of medicines upon the sick, in doses many hundred times smaller than doses in which it has been ascertained, that not only no such poisonous action, and no operation similar or analagous to the one from which the curative effects are said to result, but no appreciable operation of any kind whatever are produced by them upon well persons." As presented by Dr. Ames, the parallelism is deficient in the very points essential to the argument for which he would use it, though owing to the ingenious obliquity with which the fallacy is introduced and managed, it might very readily escape observation.

After the remark quoted above, as to the manifest effects of medicinal agents in health and disease, Dr. Ames selects two examples for illustration, and says—"Lemon-juice, it has lately been discovered, exercises a speedy and efficient curative agency in acute rheumatism, an inflammatory affection in which contra-stimulants or sedatives are necessarily the only effective remedies. Now is there any thing in the physiological effects of lemon-juice

which would indicate this therapeutic effect? Is it a cardiac sedative, administered to persons in health? I believe not. No mention is made of any sensible physiological effects from it, by either of the few authorities I have consulted, though among them is the elaborate work of Dr. Periera, the last edition, where one might expect to find them, *if any where.* Certainly it has no considerable power in this respect, if any at all; and yet it is said to reduce the force and frequency of the pulse in this disease, with a degree of power not equalled by the most active sedatives known to the materia medica. Let us suppose, then, that when *this* discovery was first announced—a discovery of such value that it has been said, on high authority in England, to mark an era in the history of practical medicine"—(in that case, of almost equal value to Dr. Ames' discovery, the "new medical fact") "physicians, instead of testing its value in the circumstances of disease in which its sedative power was affirmed, had set about to determine whether this was true or not, by giving it to well persons, to try, in fact, whether it would cure rheumatism, by giving it to persons who had no rheumatism to cure, what the *à priori* inference from such experiments would be, as well as its value when made, is obvious enough."

This seems right strong. But, let us state the case, so that it shall bear fairly upon the point at issue. The dose of lemon-juice recommended thus for the cure of rheumatism, is about two ounces, say three times a day, or six ounces in the 24 hours. Now, suppose that Dr. Owen Reese, in speaking of it, in this particular dose, had said that it was sedative; that the sedative was its medicinal effect; that this medicinal action was not in the ratio of the quantity administered, except within narrow limits, because of a counteracting poisonous operation, should the quantity necessary for its medicinal action, be slightly exceeded; that it was difficult to avoid this poisonous action; that even his smallest dose produced "very sensible effects upon the head and stomach," &c.; all in virtue of "*its activity merely*" *independently* of certain eccentricities of action; and suppose, further, that in his experiments for the cure of rheumatism, with the lemon juice, he had prescribed it in conjunction with other remedies that were known to be useful in the cure of this disease; were powerful sedatives; produced *very sensible effects upon the head and stomach; all* such as he had ascribed to the lemon-juice; and still further, that not only were the doses of lemon-juice extraordinarily minute, but

that the method of administration was such, that of necessity a considerable portion—and how much, unknown—of the active principle, the citric acid for example, must be lost; and then, suppose that another physician should test the action of lemon-juice, in such a way as to avoid the possibility of mistaking the effects of other agents for effects produced by it—upon the well, for instance—not only in the doses recommended, but in this dose many hundred times multiplied, and should find that not only did it not produce any *one* of the *several* effects attributed to it by Dr. Reese, but had no appreciable action of *any* kind upon the system, even in this augmented dose; what the inference—*à priori*, or *à posteriori*—"would be, as well as its value when made, is obvious enough," truly, as Dr. Ames remarks. What, under the circumstances, would be the most reasonable inference? That Dr. Reese had attributed effects to the lemon-juice, that were fairly attributable to the other agents used in conjunction with it, or that his lemon-juice, setting at defiance all the experience of the past, in regard to all other powerful remedies and poisons, and all natural agencies and influences,—all analogy—really was capable of producing all these various effects ascribed to it, when given to a person who had rheumatism, and yet produce no manifest effect whatever upon the healthy subject in such comparatively immense doses—say from two or three hundred ounces in the day, to sixty and some odd gallons at a *single dose*—which would bear the same proportion to the dose of Dr. Reese, that my doses of phosphorus bear to that of Dr. Ames. Think, as to the possibility of giving *lemon-juice*, *even*, to the well, without effect, in doses so vastly augmented above such as, on the sick, it would produce such various and remarkable results, even were it possible to find a stomach of sufficient capacity to contain them? It will be observed, too, as we proceed, if I mistake not, that Dr. Ames *strengthens* his argument by weakening the lemon-juice. In the quotation just given, it will be remembered that, speaking of this article, he asks the question: "is it a cardiac sedative administered to persons in health?" and states that *no* sensible physiological effects are said to arise from it, by authors that he has consulted; among others, Periera. Now, for all practical purposes, lemon-juice may be looked upon, merely as a form of administration, of citric acid. This is its chief constituent. Merat and Delens say of the latter, "il est employé en médecine aux même usages que le suc de citron." Speaking of lemon-juice, *Periera* remarks, that on account

of the difficulty of preserving it, citric acid may be substituted for it. Speaking of the *physiological* effects of the acids, as a class, including of course the citric acid or lemon-juice, he says that they, "in *moderate* doses, at first allay thirst, sharpen the appetite and promote digestion, check preternatural heat, *reduce the frequency of the pulse.*" Professor Giacomini of Padua, speaking of citric acid in a separate form, and as lemon-juice, classes it among his *hyposthenisants or contrastimulants*, and covers nearly half a page in describing its effects upon the healthy subject. Galtier, speaking of his "médication tempérante ou rafraîchissante" says: "Les changements *physiologiques* qui forment le principal caractère de cette médication, consistent dans la diminution de la chaleur, de la soif, dans le *ralentissement de la circulation, &c.*"—"Les médicaments tempérants ou rafraichissants appartiennent presque exclusivement au règne végétal; ce sont ou des acides, tels que les acides tartrique, *citrique*" &c.

Foy, referring to the second genus of the second order of his second class, "temperants," defines them, "médicaments propres à modifier la trop grande activité des organes en *ralentissant la circulation* et en diminuant la production de la chaleur animale." &c. "Les tempérants les *plus usités* sont, parmi les végétaux, l'orange, *le citron*," &c. It would be unnecessary to consult authorities further on this point.

In further illustration of his argument, Dr. Ames speaks of a case in which a patient took "the *enormous* quantity of an ounce of quinine in the course of four days, in doses of 40 grains, given three times daily," without "any *material* change in the pulse," though, "what change there *was*, indicated an increase rather than a diminution of its frequency;" and he calls to mind the fact, that an effect of this remedy in certain febrile affections, is to reduce the frequency of the pulse. It seems, however, that, in the case in question, *some effect* was produced by the doses used; and had none been produced, the case would still have to be regarded as an exceptional one, for it is well known that quinine, even in very much smaller doses than those mentioned, does, as a general rule, produce very appreciable effects upon the healthy subject. An average dose of quinine, among physicians of the South, with a view to its medicinal sedative action in febrile and inflammatory diseases, we may say, is about ten grains, given as often as every eight hours. The quantity taken by the patient, spoken of by Dr. Ames, was four times as large, and he calls it *enormous*. To

deserve the appellation, however, as applicable to the doses of the tinctures of phosphorus given by myself, as compared to the preferred medicinal dose of Dr. Ames, the quantity should have been something larger. Let us see: The quantity given by Dr. Ames is about three drops of his saturated tincture in the twenty-four hours. I took, myself, for eight days, fifteen drops of his saturated tincture,—each drop being equal to ten of his diluted tincture,—amounting to fifty times as much per day. His patient, then, instead of taking 120 grains of quinine per day, should have taken 1,500 grains, or over three ounces; and instead of 480 grains, or one ounce, in the four days, 6,000 grains, or a little over twelve ounces in the same length of time. And in regard to the single dose: to deserve the term "enormous," as compared to an average medicinal sedative dose of quinine, in the same degree that a dose of the tincture of phosphorus given by myself in one instance—to-wit, 200 drops of the saturated tincture, equal to 4,000 of Dr. Ames' doses—would deserve to be so called, as compared to the medicinal dose of Dr. Ames, the patient should have taken, instead of forty grains, the nice little dose of *forty thousand grains, or eighty-three ounces*, and the small fraction of 160 grains over; or something *more than five pounds;* thus, 1:4000::10:40,000.

In my former paper, a remark like this is found: "Here, a child, seven years old, took, at a single dose, one thousand eight hundred and twenty of Dr. Ames' doses for the adult." In regard to this, Dr. Ames says: "The phraseology here is somewhat peculiar; it is not said that the child took one-tenth of a grain at one dose, but 1820 of Dr. Ames' doses." Although, from my experiments, at the time of writing, it was my impression, that the quantity of the tincture given, (it being Dr. Ames' diluted ticture,) contained about one-tenth of a grain, owing to the loss by vaporization on mixing it with water for administration, I could not be certain as to the quantity that the subject actually got of the active principle. I knew, of course, that he did not get *all* of the tenth of a grain, supposed at the time to be contained in the solution; but as to whether he got the half of it, the fourth of it, or *any* of it, indeed, I could not be positive. The actual quantity of the phosphorus that the subject swallowed, then, was, very properly, a doubtful question, while, as to the relative quanty, I could entertain no doubt; and the phraseology, therefore, was such only as the circumstances would admit of.

Dr. Ames, alluding to the inference, that there must have been

some mistake on his part, in attributing any efficacy to doses so minute as his were, when it was shown that it could be given in doses many hundred times greater to persons in health, without appreciable effect of any kind, says, that stronger instances could be found in cases in which several grains had been given, without any sensible effect. There are such cases on record; but Dr. Ames, in his paper on Pneumonia, quotes authority to show, and tells us, that his "own *experience* of its effects most *certainly* leads to the same conclusion," that in all such cases, "the article had undergone some change, in its chemical state, that rendered it inert." This is his explanation of the "eccentricity" of the article as a poison. But he does not speak more distinctly and clearly of any action of phosphorus, than he does of certain effects observable from his medicinal dose, arising from "its activity merely," and aside from any eccentricity of operation. Certain consequences are ascribed by him to "the eccentricity of its action as a poison;" certain others are spoken of as its common and ordinary effects, resulting from "its activity merely," and the one quality, cannot of course be fairly invoked to explain away the non-occurrence of effects that ought to grow out of the other quality.

Alluding to the facts that other remedies are also irregular in their action, and may sometimes be given in doses with safety, much larger than doses in which they sometimes prove mischievous, Dr. Ames relates the following case, which he says came within his "own knowledge, when a student of medicine."

"A child between two and three years old, got hold of a vial of calomel by accident, which she broke while playing with it, and liking its sweetish taste, ate up a *full* ounce of it before she was discovered. But the child showed no sensible effect from this enormous dose, except that the next day, a *single* free evacuation of the bowels took place."

Now, as a matter of course, this was an exceptional case; the want of effect resulting from "eccentricity," or some other very unusual cause; and therefore such want of effect cannot be fairly adduced as parallel to the general absence of effect, in experiments on the healthy subject with Dr. Ames' tinctures of phosphorus in large doses, and of all the symptoms said by him to result from its administration in small doses, and arising from its "activity merely," aside from its eccentricity." If it were a fact that calomel might generally thus be given without effect in such large

doses to the well, known as it is, that in much smaller ones it is capable of producing very appreciable effects upon the sick, then the analogy would be such as to entitle the illustration to some weight.

The ingestion by so young a child of such a meal of calomel, (and a child of the age would scarcely have eaten a larger quantity of the most palatable solid food at once) would be likely to be very alarming to the parents; and they would also of course be urgent that measures should be adopted to secure if possible its evacuation, say by emesis, from the stomach. If this was actually accomplished, and the calomel subsequently dried and weighed, of course there could remain no doubt that the child really had swallowed it; but the case would be of less value, if possible, then, than it is as an illustration of the point for which it is adduced; and Dr. Ames does not speak of any means having been adopted, with such an intent.

The case is *indeed* an extraordinary one. The causes in operation to develop not only such a remarkable resistance to the action of an article known generally to produce appreciable effects in moderate doses, when taken under any thing like similar circumstances, but also in consequence of which, actions that the article usually quickens, (and at the tender age of the child mentioned by Dr. Ames, the bowels are extremely susceptible to the operation of irritants,) should have been, as it were, suspended or retarded, must have been very peculiar. The child, it will be remembered, had *one* loose evacuation from the bowels during the following day; none, it would seem, on the day that it ate the meal of calomel, or at least after it, nor the night following. In a period then of 24 or 36 hours, after eating a *full* ounce of calomel—a quantity *equal to about half a pound* for the adult—a child between two and three years old, and which, it can scarcely be questioned, would have otherwise—that is, without the calomel—had at least two or three, had *one* loose evacuation from the bowels. It is difficult to say what estimate should be placed upon such causes, and, of course, the case, as stated, is not a suitable one, with which to illustrate the point under consideration. It would have been interesting, however, to have traced the progress of *such* an "*infant phenomenon*," from childhood to maturity, and to have noted the physiological anomalies that it would probably have exhibited. It would, no doubt, have been found, that to "eat conger and fennel, and drink off candles' ends for flap-drag-

ons," would be a mere "matter of moonshine" to it. What a voracious little cormorant it must have been.

Even allowing due weight to the fact, that, in very rare and exceptional cases, particular medicines fail to produce their usual effects, or do so with extraordinary violence, owing to individual peculiarities, the case, in its various details, as related by Dr. Ames, is truly, as he terms it, an *extraordinary* one; so much so, that were it not that he tells us it came *within his own knowledge*, doubts might well be entertained of the reality of its occurrence, as supposed—that there might possibly have been some mistake—that the child broke, perhaps, a vial of whiting, or of some other inert powder—or that instead of really eating the full ounce of calomel, it might have wasted it. If the child was not actually *seen* to eat the calomel, (and it is scarcely probable that any one, whose testimony could be considered of any value as to the fact, would have witnessed the process without interfering to stop it; and, moreover, the discovery seems not to have been made till *after* the full ounce had been eaten,) in view of the termination, many persons would hesitate to accord full faith to the supposition that it did so. It is frequently a difficult matter to get a child to take a few grains of calomel, even in the most tempting vehicle. Certain chemists and pharmaceutists tell us that calomel is tasteless. Dr. Ames says, that it is sweetish. Every one to his taste, as a matter of course. Very few, however, are fond of calomel; and its *sweetness* seems of such a peculiar kind that one would suppose the grossest appetite would be surfeited by but a very small part of the quantity, said to have been eaten by this little child. Curiosity might well be awakened, to know whether it—cried for "more."

[To be concluded in October No.]

ARTICLE XXVI.

LETTERS FROM SAML. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY.

LETTER NO. 4.

MONTGOMERY, ALA., July 20th, 1855.

Messrs. Editors—Although it is my desire to avoid as much as possible an indulgence in theoretical, or hypothetical speculations, an examination of those phenomena which I have indicated as characteristic of the opposite conditions of excitement and depression, or of inflammation and congestion, which are, of the former, a

hot, dry skin, and a *full, strong pulse*, and of the latter, a *cold, flaccid skin*, and a *feeble pulse*, together with such other signs as are usually connected with these general conditions, will necessarily involve some delicate points, both in physiology and pathology, I feel authorized in presenting some general views, which, though they may be considered as speculative in their character, are, nevertheless, necessary to a satisfactory explanation of those phenomena.

We have before stated that the nervous system, including the great centre, the brain, spine and ganglia, may be disturbed, in part or in whole, by the causes of excitement or depression, without materially disturbing other parts, and that one organ may be in a state of depression, while the general system is in a state of excitement, or that an organ may be in a state of excitement, while the general system is laboring under depression, as in cases of *congestion* of the liver, attended with a *hot, dry skin*, and a *full, strong pulse*, the characteristics of general excitement and inflammation, or as in cases of *inflammation* of the lungs, attended with a *cold, flaccid skin*, and a *feeble pulse*, the characteristic signs of depression and congestion. But in these cases, as I have stated, the congestion and the inflammation must both be viewed in the light of local affections merely, having little or no agency in determining the general condition. It may not be so difficult a matter to account for the production of local affections, and the manner in which they spread and become general, if we will call to our aid the *principle* of *particular* and *special vital affinities*, the existence of which are sufficiently evident, from the toxicologic and therapeutic action of various articles of the materia medica, upon which principle, indeed, we must rely for an explanation of the existence of an almost endless variety of local affections. Thus, we may suppose that a morbid impression is made directly, or indirectly, upon the nerves of an organ, or upon that portion of the nervous centre which controls it, where it may be chiefly confined under the character of a *local* affection merely, or through sympathy, or by proximity and intimate relations with other organs, the impression may be communicated to other organs, systems and tissues, and thus the disease may become *general:* such, no doubt, is the case, with respect to the origin and development of most of our diseases; but all this does not serve to explain the existence of the general conditions of excitement and depression, or of inflammation and congestion, and we are compelled to look beyond the influence of local causes, or the agency of vital affinities, to those

causes which exert an influence upon the whole nervous system—such, for instance, as an impoverished state of the blood, from a watery, poor diet and a feeble digestion, which would predispose to diseases of depression, by inducing a state of debility throughout the whole nervous system, while an opposite condition of the blood, from a rich, nutritious diet and a vigorous digestion, would give life and energy to the nervous system generally, favoring the existence of diseases of the opposite character. Or we must look to those, which, though they do not exert their influence upon the *whole* nervous system, as in the case just stated, do, nevertheless, exert it upon a large portion. Atmospheric heat, for example, being a natural healthy excitant, to a certain extent, imparts life, vigour and activity to all the vital functions; but, beyond this point, it becomes an unhealthy stimulant, exerting its power, mainly, upon the nerves of the cutaneous capillaries, and by sympathy, upon those of internal organs, and *more especially upon those of the liver*, thereby exciting them to undue and continued action, thus gradually exhausting the aggregate amount of nervous power, but *especially* of the *organic nervous system*, upon which its influence is particularly exerted, and they all together fall into a state of debility, torpor, and inactivity, proportioned to the intensity and duration of the cause, and the amount of action thereby induced.

These examples may serve to show the probable manner in which most of the causes operate, which tend to the production of the general condition of depression and congestion. Some of them being direct and general, and others indirect and partial, in their action—some tending directly to the nervous centres, where they exert their full force and power, bringing all dependent parts, more or less, under their influence; while others tend to particular organs, systems and tissues manifesting the signs of local affection only, or, which may, by sympathy and otherwise, have their influence transmitted or extended to other organs, systems and tissues, thus rendering the affection general. But, after all—as our knowledge and insight into the condition, and the operations of the nervous system, is, at best, exceedingly limited and imperfect, except as it is derived from the movements and disturbances in the circulatory system, and as the action and condition of the heart, arteries and capillaries afford the best index to the condition of the system, with respect to the amount of vigor, as well as the degrees of excitement and depression—it is important and necessary that we should keep constantly in view the circumstances which con-

trol and influence their action. These are so numerous, and of such variety, that I cannot venture, at present, upon their enumeration, but will merely suggest, that to render the action of the heart available in determining upon the general condition of excitement or depression, it is always necessary to endeavor to ascertain, how far its action is influenced or controlled by disturbance in the nervous centres, how far by sympathy with other organs, and how far by impressions made directly upon the organ itself. Much stress has been laid upon the action of the heart, and some controversy indulged in by writers upon "pernicious" or congestive fever. While some of them have represented the pulse (which is the general index to the action of the heart) to be "*small, frequent* and *feeble*," others have represented it as "*full* and *bounding*," and others, again, as "*loud, strong* and *tumultuous*." Now, while some of these cases show the heart to be decidedly under the influence of depression, others show it to be evidently under the influence of excitement, and, as they all attempt to describe the same condition or modification of disease, how is this conflicting testimony to be reconciled? I can readily conceive the existence of these apparently discrepant conditions of the pulse, in one or the other of the classes which I have made, as, for instance, in the *congestive*, the *small, frequent* and *feeble pulse;* in the *congesto-inflammatory*, the *full* and *bounding* pulse, and in the *congesto-irritant*, the *loud* and *tumultuous*, but not *strong* pulse, which certainly does not belong to congestion, in any of its forms or modifications, as a general pathological condition. But I am not prepared to admit that the heart plays as *active* a part in the *production* and *maintainance* of the conditions of excitement and depression as is generally supposed, and allowing the full share which the heart sustains in these disturbances, my impression and belief is, that it should be looked upon, and regarded rather in the light of effect, than of cause; that it possesses a sort of counterballancing or regulating power between the pulmonary and the capillary extremities of the circulation, and by a wise provision of nature is enabled to maintain a tolerable degree of regularity and uniformity of action, amidst the greatest disturbance in other organs, and that its disturbance, by excitement or depression, is more often sanative than productive of mischief. Even in cases of high local excitement and inflammation, in which the heart participates, it will hardly be maintained, or urged, that the heart has any decided agency in the production of the inflammation, in *electing* the points of determination, or in

sustaining its continuance after it has been produced. As cases of inflammation are often met with, which progress even to a fatal termination, during the progress of which the action of the heart is reduced to its lowest perceptible point; or, perhaps, better evidence of the existence and progress of inflammation, independent of the *heart's action*, may be found in the effects of certain therapeutic agents, as the *veratrum viride*, for instance, which is said by those who have fully tested its effects, to possess the power of controlling readily the heart's action, without subduing or arresting the progress of inflammation. If these views be correct, with regard to the part which the heart sustains in the existence of these conditions, where are we to look for their true seat, and to what, as their true cause?

I have stated on a former occasion, that while *excitement* in the *nerves* which control and regulate the action of the capillaries, favored an *increased* or *more rapid flow of blood through the capillaries* of the *pulmonary artery*, it tended, at the same time, to *retard* its *flow* through the remote or general capillaries, and that *depression* produced precisely the opposite condition of things, to the effect, that while it tends to retard the flow of blood through the pulmonary capillaries, it facilitates its escape or allows of its easier flow through the general capillaries, the heart, if undisturbed by other influences, rising or falling in excitement and action, as one or the other of these conditions may prevail. I here, find myself involved upon a point of pathology, with respect to the action of the capillaries directly in opposition to, and at variance with the highest authority, upon such subjects; for Dr. Wood, who is sustained by Dr. Carpenter and others upon this point, maintains that an *enfeebled* condition of the capillaries, has the effect of retarding the flow of blood in, or through these vessels. Speaking of the *nature* of pernicious fever, and particularly of cases of collapse, he says: "This is prominently characterised by a want of action in the capillaries and extreme arteries." . . . . . "They collapse simply because they contain no blood, just as they collapse in death." . . . . . "In the pernicious fever, the innervation of the extreme vessels fails and they cannot, therefore, perform their part effectively in the circulation. The blood enters them with difficulty, in their enfeebled state, and is carried through them very slowly. Hence the paleness, and hence also the lividness of the surface, owing to the stagnation of the blood."

Now, where I would ask, is the blood which should fill the

cavities of those vessels which "*collapse, because they contain no blood,*" if it has not passed them and entered the venous cavities, as *fast* or *faster* than it was sent to them by the action of the heart, or supplied by the lungs; for if it were not so, the arteries could not become emptied, and we would find the *anomalous condition* of a general arterial plethora or engorgement, with a state of general venous congestion and collapse. I do not wish to convey the idea that every disturbance in the circulation necessarily implies an undue accumulation of blood upon the right, or upon the left side of the heart, that is, in the venous or arterial cavities—or that excitement does not increase, and depression diminish vascular action, and that the whole current of blood may not be accelerated or retarded in its circuit, without materially disturbing the balance, between the pulmonary and the general capillary extremities of the circulation. But what I maintain is, that, for the establishment of the general conditions of venous congestion, or arterial plethora, it is absolutely necessary that the balance between the two extremes of the circulation should be broken—that is, to empty the arteries, and fill the veins, the blood *must flow faster out* of the arteries than it flows *into them;* and to *fill* the *arteries*, it *must flow faster into, than out of them*, whether either be by a slow or rapid process. And, while I admit the want of blood in these vessels to be the cause of paleness, in such cases, and the *slow movement* of the blood through them to be the cause of the *lividness* of the surface, yet *stagnation* does not take place in them, until the heart ceases to supply them with blood, unless it should possibly do so in cases of inflammation. Dr. Wood makes the further remark, in connection with this subject, which is important to our purpose, that "this condition of the capillaries (enfeebled) may *co-exist* with considerable *power* in the *heart;* for the want of innervation is not necessarily equal in the whole circulation." This principle we shall have occasion to apply to the explanation of some of the phenomena of congestion.

In order to present my own views in as clear a light as possible, which I find apparently in conflict with those of the distinguished authors just named, I will quote them further upon this subject, *italicising* those points, having the greatest bearing upon the subject at issue:—

In treating of "passive congestion," Dr. Wood says: "The depression giving rise to congestion may be general, or confined to a particular organ. Nothing is more common than the occurrence

of this condition in diseases attended with *sudden and great prostration. The heart, participating in this prostration, is unable to transmit the blood so rapidly as it is conveyed towards it by the continued action of the capillaries, and by the forces which move the blood in the veins.* This fluid, therefore, necessarily accumulates in the right side of the heart, and the great venous trunks, and, consequently, in those organs with which these trunks more immediately communicate—viz., in the brain, liver, and through this latter organ, in the abdominal viscera in general." The case represents a congestion occurring from the sudden application of a depressing cause, directly to the heart itself, which does not presuppose the existence of depression or debility in the capillaries, and hence it can be regarded only as a temporary or fugitive condition; nothing being said with regard to the movement of the blood in the lungs. The next quotation from the same author, upon the same subject, tallies precisely with my ideas, upon the subject of "Congestion"—"Congestions, frequently also arise from local depression, affecting especially the capillaries of the part. From causes, directly or indirectly operating on these vessels, such as have been already enumerated under the head of depression, they become incapable of performing their usual part, in sustaining the onward movement of the blood, which therefore accumulates in the vessels behind them, especially when these latter vessels happen to be the recipients of venous blood. Thus, when the capillaries of the lungs become depressed, the venous blood carried regularly towards the right side of the heart and thence sent into the pulmonary arteries, accumulates in the ramifications of these vessels, distends their trunks, and even loads the right ventricle so as to produce great venous engorgement of the lungs and heart—so also of the liver. A depression of the capillary circulation in this organ leads to accumulation in the whole portal system of veins, not only in its hepatic ramifications, but in the vessels and their radicles, which convey the venous blood from the abdominal viscera to the vena portarum. Hence arise congestions of the stomach, bowels, spleen and liver."

Here we have presented not only the *true seat of congestion*, which, as I have previously stated, can originate at only two principal points, viz., in the *capillaries* of the *pulmonary artery* and in those of the *vena portarum*, but the *true cause*, also to be found in the enfeebled condition, and depression in those vessels, to which the action of the heart cannot essentially contribute, though it often participates. I will quote a single opinion from "Carpenter's Prin-

ciples of Human Physiology," for the purpose of showing how congestion may be brought about by a somewhat different process than those just named, which is this: "It has now been sufficiently proved, both by experiment and by pathological observation, that the first effect of the non-arterialization of the blood in the lungs, is the retardation of the fluid in their capillaries, of which the accumulation in the nervous system and the deficient supply to the arterial, are the necessary consequences."

The prime cause in this case is *defective* or *imperfect respiration;* the second step is the non-arterialization of the blood; and the third, its retardation in the capillaries and a general venous congestion. This may serve to account for the production of congestion in the lungs, but not so well for congestion in the *portal circulation*, as that system is sometimes in a state of complete congestion, when the lungs are comparatively, or entirely free. But, under all circumstances of congestion, the chief danger arises, (except in extreme and sudden cases of depression) from the want of a sufficient quantity of well oxygenized blood in the arteries, for the support of the great nervous centres, and for giving life and activity to all the organs and their respective vital functions.

Applying the foregoing principles to an explanation of the phenomena of *congestion*, under the different forms and modifications, as I have classed them, and passing by those signs of pneumonia, which belong to it as a *local affection*, under whatever form or modification it may assume, namely, the *pain*, *cough*, and *expectoration*, and, I may add, *impeded respiration*. The first one which will claim attention is *animal heat*: This is the product of the combination of oxygen with venous blood in the lungs, whereby it is converted into the character of arterial blood, and fitted for the offices just mentioned. The process by which it is generated, whatever share or agency chemistry may be supposed to have in its production, should be regarded as a purely vital process, its generation, in *amount*, depending upon the *tone* of the *pulmonary capillaries*, the *easy flow of blood through them, and the freedom of respiration*. The amount of this product serves as an index not only to the rapidity with which it is generated, or to the rapidity with which the pulmonary circulation is carried on, but also to indicate the points of determination and the seats of the greatest accumulations of blood.

The condition of the *pulse*, which depends upon the amount of blood in the arteries, and which is *regulated by the action of the*

heart, serves also to indicate the activity of the pulmonary circulation, and the amount of action *in the heart*. Thus, in cases of general excitement, constituting the *inflammatory* condition, when the pulmonary circulation is active, the heart sharing in the general excitement, and exerted further to action by the stimulus of freshly oxygenized blood, the blood is sent forward to the extreme arterial ramifications and capillaries, which failing to transmit it as *fast* as it enters through the pulmonary extremity, necessarily accumulates in those vessels and in the arterial trunks, giving rise to the phenomena in question, namely, *a hot, dry skin*, and a *full, strong pulse*. This accumulation of blood in the arteries and the excitement in the capillaries, which rises above the secreting point, gives rise to the dryness of the skin, to its flushed, and turgid appearance, to dryness of the tongue, to constipation of the bowels, and to the suspension of the secretions in general. Upon the same principles, there can be but little difficulty in accounting for the phenomena which characterise the *congestive* condition. As the pulmonary circulation languishes under the influence of debilitating and depressing causes, and the process of *oxydizing*, and *arterializing*, the blood becomes proportionately diminished, less *heat* is generated, and the heart, yielding to the general depression, and the withdrawal of its *accustomed stimulus*, becomes diminished in action, but having the power of acting for a time, independently of its accustomed stimulus, continues to send the blood forward through the arteries and capillaries *faster* than it *enters* them through the lungs; the necessary consequence of which is, that the arteries and capillaries become measurably emptied of blood, which accumulates in the venous cavities, where the *heat* also accumulates, leaving the *skin cold* and *flaccid*, and the *pulse small, feeble* and *frequent; small* from the comparative emptiness of the arteries, *feeble* from the diminished action of the heart, and *frequent* from the disproportion between the power of the heart and the greatly reduced, and small quantity of blood in the arteries and capillaries. In the same manner we may account for the pallor, and lividness of countenance, the shrivelled condition of the skin, particularly of the extremities, and such other general signs as grow immediately out of such a disturbance in the circulation, reserving those which grow out of disturbance in *particular organs*, for examination in connection with the *congesto-inflammatory* and *congesto-irritant* conditions. It may not be amiss to notice, in this place, the signs as exhibited in *these* separate conditions, which grow out of the

respiratory movement, and which are referable to the same cause, namely, depression in the respiratory organs, with a like condition in the pulmonary capillaries; such as, the feeble, husky voice, cold tongue, and breath, and slow feeble respiration, in congestive cases; frequent sighing, and sometimes stertorous breathing in congesto-inflammatory, and hurried breathing and often sense of suffocation, in the congesto-irritant cases. Another set of phenomena, which serve to mark the difference between these separate conditions, are the *cerebral symptoms*, which seem to depend for their existence upon the action of the *heart*, in connection with the extent of pulmonary congestion. Thus, a certain amount of blood being necessary at *all times* upon the brain, it is evident that when the enfeebled action of the heart, from the want of a sufficient supply of arterial blood, fails to supply the demand, syncope and death would soon follow, if the want of supply was not, by some means, compensated for, which is fortunately provided for in two ways—one by atmospheric presure, and the other by the congestion of the lungs and heart, whereby the blood is prevented from escaping from the cranial cavity to such an extent as to produce such a result, which is sometimes the case, from a patient's assuming an erect posture, in extreme cases of depression and congestion.* This compensating influence of congestion of the heart and lungs, for the enfeebled action of the heart, gives rise to the peculiar and characteristic phenomenon of an undisturbed and almost unclouded intellect in the midst of an overwhelming congestion, and

* A remarkable instance of this kind occurred under my observation a few years ago. I was called to see a patient who had been labouring for two or three days under an attack of pneumonia, but was not thought to be very ill. I was accompanied in my visit by a non-professsonal friend. We entered the cabin and found an able-bodied negro man, 25 or 30 years of age, and perfectly healthy otherwise, lying very quiet and undisturbed, measurably free from pain or distress. A slight examination of the case satisfied me that he was in great danger; but a different impression was made upon the mind of my friend, who also examined him, as he *sat up in bed* and gave a clear and intelligible history of his case, and of his present feelings; and he remarked to me that he could see nothing seriously the matter, and thought the visit rather an unnecessary one, which proved to be *true*. My friend had left the room, and stepped into the yard, where I joined him soon after, and expressed to him my fears as to the result of the case; but he was incredulous, as he could see no symptoms of a dangerous character, and desired me to point out, and explain to him the symptoms by which I formed my opinion. I told him I arrived at my conclusion very much as he would recognise an old acquaintance, which is much easier to do than to describe him so as others might recognise him. And while I was endeavoring to point out and explain to him the dangerous features of the case, we were called into the room, and entering hastily, we found *our* patient—dead!

upon the very verge of death. If, however, an impulse be given to the action of the heart, while the congestion yet remains, by which means an increased quantity of blood be thrown upon the brain, it may give rise to dulness, confusion of intellect and stupor, as it appears in the congesto-inflammatory affection; or, if, as in the congesto-irritant forms, the action of the heart becomes excited from irritant causes, and the blood is hurried rapidly (though in diminished quantity) through the arteries and their capillaries; or if, as is often the case, an irritation be communicated directly to the brain itself, instead of dulness and stupor, there will be *delirium*, *phrenzy* and *convulsions*.

I have omitted, heretofore, to notice the condition of the skin, and state of the pulse, as they exist in, and which serve to distinguish the congesto-inflammatory and congesto-irritant modifications from each other, and from those already noticed. To explain these signs, or phenomena, with reference to the former, or congesto-inflammatory form, we must suppose the system to be possessed of a considerable amount of vigor; but under the influence of depressing causes, such as have been mentioned, the pulmonary circulation becomes retarded, sufficient to diminish the generation of animal heat, and, in the same ratio, to diminish the action of the heart; while the remote capillaries, retaining a share of their tonicity, oppose the too free transmission of blood through them, giving the character of fulness to the arteries; hence, the pulse is usually slow, full, or bounding, (and sometimes strong, if the action of the heart should be suddenly increased,) and compressible, and the skin cool and moist, except during the height of exacerbations.

In the congesto-irritant cases, we presume the following condition of things to exist: The heat generated in the lungs, though minus, is carried rapidly with the blood to the remote capillaries, by an increased action of the heart, which vessels, being in an enfeebled condition, permits the escape of the blood, as fast as it enters, by the lungs, whereby an accumulation in the arteries is prevented; but the rapid circulation of blood in the arteries, though deficient in quantity, gives rise to the phenomenon of a *hot skin*, and the enfeebled or relaxed condition of the capillaries, allows of the free escape of perspirable matter; hence, the *moisture of skin*, and often profuse sweats, while the increased action of the heart, operating against a diminished column of blood, gives rise to the *smallness*, *general feebleness*, and *great frequency* which characterizes the condition.

I have thus far made a hurried and imperfect analysis, or pathological examination, of such outward and general signs of congestion as grow out of a disturbed and broken balance of the circulation, in which the pulmonary circulation is chiefly concerned, and which may serve to distinguish the degrees or modifications under which I have classed it. But not the least important phenomena, belonging to the condition, yet remain to be considered, in connection with congestion of the liver, and portal system of veins, which I will do in my next letter.

I am almost afraid that your patience will become exhausted, from seeing such a long array of *promises*, without any *practical deductions;* but as *they* will follow in due course of time, I must beg you to "*hold on*" awhile longer.

Yours, as usual,

SAML. D. HOLT.

ARTICLE XXVII.

Remarkable Case of Gun-shot Wound of the Head. By H. V. M. MILLER, M. D., Prof. of Physiology and Pathological Anatomy in the Medical College of Georgia.

A stout young negro man, about twenty years old, was shot in the head, on the 31st of March, by the accidental discharge of a pistol. The ball entered the cranium one inch above the right eye, at a point corresponding to the middle of the right hemisphere of the brain. The boy instantly fell from a table on which he was sitting when he received the injury. Half an hour afterwards, when I saw him, he was unable to speak or move, and was breathing slowly and heavily. Upon removing the scalp, where the ball had entered, with a view to the use of the trephine, if necessary, it was discovered that the ball had divided, about one-fourth of it being found near the margin of the fracture, while the remainder had made a clean cut through both tables of the skull, and plunged deeply into the substance of the brain. The hole made by it readily admitted the little finger, and from it was freely discharged blood and broken down cerebral matter. The probe was passed some distance along the tract of the ball, but its exact position could not be ascertained, without danger of still greater laceration of an important and delicate organ. During the examination and dressing of the wound, the boy evinced sensibility and imperfect consciousness.

The following notes of the case taken, at my request, by a medical friend, will sufficiently detail its further history:

April 1st. Last night the boy suffered some pain, but enjoyed intervals of interrupted slumber. This morning reaction has supervened: he has a full pulse, 80 to the minute; bled several ounces—pulse reduced to 75. Cold water dressing, which had been first applied, was continued. 12 o'clock.—Pulse again full and frequent, as before; bled a second time, with like effect. This afternoon his intellect is perfect; speaks without difficulty, complains but little, and gives a satisfactory account of the way in which the accident occurred, and of his position when shot—in fact, remembers every circumstance, both before and after the injury. He is unable to move his right arm, or his under jaw; the left arm he moves with some difficulty, and the lower extremities perfectly. Drinks water and gruel, through a quill, with great ease.

April 2d. Bowels confined. Ordered a mild purgative, and, subsequently, an enema, which operated freely during the afternoon. Extremities cold for two hours before the action of the medicine; but after it, quickly regained their natural temperature; pulse 70.

April 3d. Rested well during the night; has very little pain; takes his gruel with decided relish, and is perfectly rational. Slippery elm poultice applied to favour suppuration; pulse 68.

April 4th. Slept well; pulse 66; appetite good; external wound discharging; bowels moved during the afternoon. 6 o'clock p. m. No discharge from within the cranium; pulse 72.

April 5th. Uneasy and sleepless last night. The hole in the skull found plugged with clotted blood, upon removing which, pus and broken down cerebral matter escaped freely; after which, the uneasiness subsided, and the pulse sank to 66.

April 6th. Slept well; pulse 65, soft and natural; wound discharging freely; appetite good; perfectly rational.

April 7th. Passed a good night; symptoms the same as yesterday.

April 8th, 9th and 10th. No material change in the treatment or the symptoms, except that the skin of the upper half of the body became *exceedingly sensitive*, the slightest touch of the hand, or even of the covering, producing exquisite suffering. The paralysis of the left arm is something greater, though he is still able to grasp an object with the hand and move the arm slightly.

April 11th. Complains of pain in the head—bowels confined for forty-eight hours. Ordered purgative. 6 o'clock p. m. Medicine has not acted; pain in the head continues; pulse 86.

April 12th. Bowels moved during the night. Still complains of pain in the head, and great tenderness of the surface of the body, when aroused; but there is evident tendency to coma; pulse 90. 6 o'clock p. m. Pulse 108. Since noon to-day he has not spoken, but seems to recognize those who address him, and to understand what is said to him. The stupor gradually deepened until midnight, when he died.

The following is the account of the post-mortem examination, made, twelve hours after death, by Drs. T. J. and R. C. Word:—

"The anterior half of the cranium was removed on a level with the eye-brows. On dissecting the scalp from the cranium, we observed an ecchymosed spot at the upper part of the left temporal fossa. On removing the cranium, we found that the ball had passed in an oblique direction downwards and backwards, through the right anterior lobe of the brain, into, and through the left lobe, and had lodged against the anterior inferior angle of the parietal bone, driving in the inner table of it, and fracturing the outer, at a point corresponding with the ecchymosed spot which we had observed on the pericranium. The distance traversed by the ball was, by actual measurement, four inches.

"The surface of the anterior half of the right lobe presented spots of congestion, but there was not much discoloration of the substances of it.

"The anterior two-thirds of the left lobe, especially the membranes, presented a dark livid appearance. Along the tract of the ball the substance of the brain was broken down and softened. The left lateral ventricle contained some semipurulent fluid, tinged with blood, a very little, was also found, in the right."

The interesting features of the above case, in both a surgical and physiological point of view, will so readily occur to the reader as to render unnecessary an extended commentary.

That patients sometimes live for days, and even recover, after severe injuries and frightful wounds of the brain, is a fact, well known to the profession. Generally, however, such wounds are inflicted by cutting instruments, as the sabre, or are made in such manner as to leave no foreign substance within the cranium—or, if made by a projectile, in all the cases which I can at present call to mind, only one hemisphere of the brain had been injured.

Barron Larrey relates the case of a soldier, wounded during an insurrection in Cairo, in which the ball entered the frontal sinus, passed to the occipital suture, and was extracted from thence by means of the trephine. This man recovered; but as it is expressly stated that the ball pursued the direct course of the longitudinal sinus, and its position was determined by passing an elastic bougie along that sinus, the presumption is, that neither hemisphere of the brain was wounded, at least, to any very great exteut. Many cases are recorded, in which life was prolonged after gun-shot and other wounds of a single hemisphere; but that a man would live so many days, after both hemispheres of the brain had been traversed four inches by a pistol ball, is a most interesting, if not unique, surgical fact.

It is not less wonderful, that so extensive a wound, implicating that portion of the cerebrum which is supposed to be specially concerned in the intellectual operations, should not have produced disturbance of some of the mental faculties. Up to the twelfth day, the mind was as perfect in all its parts as if no injury had been received, thus setting at defiance both phrenological and physiological laws.

The peculiarities of the partial paralysis, though not clearly explicable upon received physiological principles, are infinitely more so than the exalted nervous sensibility of the surface of the body which constituted so prominent and troublesome a feature of the case.

However tempting the occasion, I do not propose to append to this history any speculations of my own, but simply to submit it to the consideration of the profession.

ARTICLE XXVIII.

Eccentric Irritation as a cause of Infantile Convulsions. By N. S. WALKER, M. D., of Eatonton, Ga.

In the March No. of the London Lancet, page 216, I find a very interesting paper, on Eccentric Irritation as a cause of Infantile Convulsions, by Dr. Molloy.

I wish to add a little of my own observation and experience. I shall not go into detail, as to the symptoms or causes of this dreadful malady, but shall add a few cases, relative to the treatment. It is generally conceded that the causes are twofold—viz:

cerebral and gastro-intestinal; but the former cause I believe to be rare in infants.

The author recommends the injection of warm water, as never failing to arrest the paroxysms, and I have met with the same result in my practice.

CASE 1st. Sept. 1853.—I was called to see a negro child, æt. 16 months, the property of J. M., of Putnam county, and found the child semi-delirious, and having convulsions every ten or fifteen minutes. He had taken a large dose of calomel, followed by castor oil, which had acted tolerably well. I immediately threw up the rectum about six or seven ounces of *warm* water, which came away in a few minutes, and was followed by another paroxysm; as soon as that had passed off, I again threw up as much more water, which gave immediate relief. The child went on to get well, without another unfavorable symptom. I learned from Mrs. M. that, about one month after this attack the child contracted a severe cold, accompanied with disordered bowels; convulsions followed, which were relieved by warm water injections.

CASE 2d. Oct. 1853.—Was called to see a negro child, æt. 18 months, a girl, the property of Rev. M. M.; she was having severe convulsions about every twenty minutes—had taken castor oil the night previous, which had acted twice. I bled her, with but little benefit. I now resorted to the warm water, which acted as promptly as in case 1st. The child had no other convulsion until about the same time next day, when the same means relieved her. I omitted to say that I gave three grains of calomel at my first visit.

CASE 3d. April 9th, 1855.—Called to see a negro child, æt. 5 months, property of F. F. Had been indisposed for several days, and on the morning of the 9th was seized with convulsions, with but little intermission—had taken castor oil the day previous, and a few hours before my visit had taken 1 gr. calomel, and had used the warm bath frequently. The calomel had not acted. I immediately gave an injection of warm soap-suds, which moved the bowels freely, and in thirty minutes another injection was given. The child had but two slight paroxysms after this, and on the day following was convalescent.

The last case is not a very marked one, of relief afforded by the water treatment, as it is likely that the free action of the bowels might have been followed by relief. I would say, also, in conclusion, that the mother of this last child had lost three of her offspring at this age with this disease.

The above cases were not intended for publication, or my notes would have been more explicit on some points; but I trust that the above will be the means of calling the profession, generally, to the therapeutical action of the warm water.

ARTICLE XXIX.

An Accidental Case of Impalement. By B. F. CHAPMAN, M. D., of Lithonia, Ga.

On Tuesday, 5th of June last, we were called to see Mr. W. W, 19 years of age—weighs 160 lbs. He had climbed up an apple tree, to gather fruit; as he came down he fell on a hoe-handle, about an inch and a quarter in diameter, which was standing under the tree: it entered his body at the anus, and penetrated for at least twelve inches, without any visible lesion, except the laceration of a small portion of the integument. We found him in great pain in the umbilical region, and had been vomiting almost constantly from the time he received the injury, which was two or three hours before our visit. We kept him on his back, and bled him copiously, which seemed to relieve him immediately; he rested tolerably well through the night. On the 6th, his fever rose very high, and he continued to have some fever for several days.

The treatment was, very light diet—mucilage of slippery elm forming the greater portion of his nourishment; sedatives, to allay pain; cold sponging, and poultices over the stomach and bowels, for days and nights; took three spoonsful, each day, of pulv. carb. ligni, in water. For dyspnœa and hæmaturia, we gave nitrous ether, combined with camphorated tinct. of opium, and uvaursi tea, with laxatives, to prevent costiveness; then astringents, when a diarrhœa set in. With the above treatment, our patient was able to go about, and labor, in two weeks.

It is but just to say, he had the best of attention during his illness. Mr. G. L. Wood (who is reading with me) remained with him for nine days.

Hydrophobia.

The following experiments made by Dr. J. H. GRISCOM, on a patient suffering from hydrophobia, at the New York Hospital, are quoted, as reported by him to one of our city newspapers.—[*American Medical Monthly.*

I found the patient, at the time of my visit, on the bed, to which he was strapped to prevent injury to himself and others, perfectly

calm to all appearance, intelligent, and entirely submissive to treatment. He conversed freely, though with some confusion of dates and facts respecting the time when he received the bite (between four and five weeks previous), and other circumstances connected therewith, and of his own feelings then. The scar was upon the lower lip, perfectly healed, and exhibiting no signs of irritation. As he thus lay and conversed, no one could suppose that he was laboring under so fatal an influence, unless either the finger were laid upon the pulse, which now numbered nearly 160, and was full and bounding, or he complained of the pain in his throat and difficulty of swallowing. On examining his throat, a degree of redness was observed in the fauces, accounting partially for the pain of deglutition. After giving further directions for his continued comfort and the prevention of more convulsions, it occurred to me to test the truth of some of the popular notions respecting this disease, especially in relation to that peculiar symptom from which it derives its name, viz: *the dread of water.* The results of these investigations, it is hoped, may have the effect not only of correcting some false views on the subject, but, what is more desirable, of hereafter alleviating the intense suffering of those afflicted with the disease, if indeed they may not increase the means and probability of recovery.

The most distressing part of the malady, is undoubtedly the *difficulty and pain in swallowing*, arising from sharp spasmodic action of the muscles concerned in this function, extending sometimes even to those of the neck and chest, and producing a feeling of alarming constriction of the organs of respiration, causing almost complete though temporary suffocation, and thus aggravating, if not actually exciting, the convulsions, with the more or less violent contortions and discoloration of the countenance, protrusion of the eyeballs, and other active and painful symptoms. It is a popular idea that all these are excited by the sight, and even by the sound, of water, and although an intense thirst almost universally coëxists, the friends, and even the patient himself, anxious as they are to alleviate it, dread even the presence or sound of water, much more its approach to the lips, lest all these horrible symptoms should ensue. My investigations, simple as they are, show how relief may be extended in future in those most distressing symptoms—*thirst* and parched and burning throat—if the means thus pointed out, are sufficiently, promptly, and carefully attended to.

That the mere *sound* of water will not excite the paroxysm, was proved in this case by the fact that the noise of a stream of water, in a closet, was continually within reach of his ears, to which he gave no head whatever while I was by him, though it is said that when he first heard it he was unpleasantly affected by it. Observing this, I then desired to try whether its actual taste, *without swallowing*, could not be safely borne: and to this end, I induced the patient to take a mouthful, but to hold it in his mouth without attempting to swallow. *He did so*, and after retaining it sufficient-

ly long to satisfy both him and myself, at my direction he ejected it from his mouth, expressing gratification at its cooling effect.

One step further I determined to go, though not without some fear of producing a paroxysm of pain, and perhaps a convulsion. I sent for some ice, and with a little persuasion placed a small piece in his mouth, directing him to allow it simply to trickle down his throat as it melted, avoiding, as before, every effort at swallowing. A piece about the size of a thimble was first tried, the cooling effect of which was exceedingly grateful, and he willingly accepted a second piece. It was very difficult for him to avoid deglutition; he did succeed, however, and all the ice descended to the stomach, as it melted drop by drop, demonstrating in the most conclusive manner that water *per se* has no influence in the causation of the spasms, and that the disease is improperly named. It is not a *hydro-phobia*, a dread of water; it is rather a dread of *swallowing*, whether of water, or any other liquid, or even of solid substances, as my patient said to me; and if that act can be avoided, as in his case, relief may possibly be afforded in others by the administration of cooling, and perhaps even more decidedly palliative remedies. In fact, encouraged by these observations, I directed the application of a strong solution of nitrate of silver to the fauces, with the view of allaying the irritation apparent there, and this he bore with not more difficulty than is noticed in a majority of the cases in which this astringent is applied for other diseases.

By these means, and the administration of anodyne and nourishing enemata, the application of cool cloths to his overheated head, mustard poultices to his extremities, and dry heat to his general surface, and even by inducing him, a few hours before death, actually, though slowly and with some difficulty, but not so as to bring on any general paroxysm, to swallow some ammonia and brandy, the patient was not a little comforted, and his passage to the grave made more quiet and less painful. Unhappily, there is yet no known antidote to this mysterious poison, and the symptoms can only be treated on general principles. The ebb of life was attended with no unusual phenomena—none of the unnatural sounds, barking or frothing, or biting, popularly ascribed to this disease being noticed. The vital powers became gradually exhausted, until at $9\frac{3}{4}$ o'clock on the 15th, twenty hours after admission, he breathed his last.

Cutaneous Nævi cured by the application of Iodine paint. By S. Edwards, M. D., Physician-Accoucheur to the Samaritan Hospital for Women, etc.

During the past twelvemonth I have met with two cases of cutaneous nævus in infants, which have been most satisfactorily and completely eradicated by means of the external application of iodine paint.

The first instance in which I was induced to employ it, was for a nævus unfortunately situated on the side of the neck of a female infant. At birth it appeared simply as a small, red shining spot, which in three months increased to the size of a fourpenny piece. The mother of the child at this time positively refusing to have any escharotics employed, fearing that it might give rise to a permanent and greater deformity, I recommended astringent and cold applications to be applied constantly, and this was kept up for some time, but with no good result. The nævus at the end of ten months had acquired additional size, and was observed to become redder and a little more elevated, whenever the circulation was increased by crying, etc. The parents still refusing any of my former suggested remedies, or even of vaccination, "until it got worse," I recommended the use of iodine paint, which was regularly employed by gently painting over the surface with a camel's hair pencil every alternate day, occasionally leaving it off for three or four days when the skin was very irritable and rough. Under this treatment I was pleased to find that the growth of the nævus was arrested, became smaller and mottled, and finally disappeared; a speck or two alone being visible to mark its former site.

The second case was very similar: it occurred in a little boy nearly two years of age. The nævus was about the size of a shilling, but slightly elevated, and situated on the abdomen, and had gradually but very slowly, increased since birth. No treatment had been employed, the physician who attended the mother of the child, having advised nothing to be done unless it increased. The tincture was commenced in September, 1854, and was continued more or less up to last month when the disease had disappeared, leaving scarce a trace of the mischief.

I know not whether others may have made trials of this treatment, but its success in these two cases has induced me to draw attention to it, as it is a plan so simple in its character that I can see no objection to its employment. In neither of these cases did it produce fever, or, in fact, any effect upon the general health. It is difficult, of course, to decide what might have been the result had these cases been left to themselves without treatment. I have seen several that in the course of time spontaneously disappeared; but still the fact that each of the above cases had gone on increasing up to the commencement of the treatment, and then began shortly to recede, and finally disappeared, must induce the belief that some considerable merit is due to the iodine, and that it deserves a more extended trial.

The many plans that have been proposed and adopted for producing inflammation in, and consequent destruction of, the nævus, are mostly attended with serious objections—*caustics*, by occasional extensive ulcerations, serious hemorrhages, and by exciting not unfrequently considerable constitutional irritation. *Vaccination* has, I believe generally failed, and when successful has

the disadvantage of leaving the ordinary cicatrix. The seton, needles, the injection of fluids, and lastly, and perhaps the best of all, the knife, have an aspect of seriousness to the parents, and are all fraught with occasional serious consequences. The latest plan which has been suggested, is that of Mr. J. B. Brown, who has produced pustules on the cutaneous nævus by means of tartar emetic ointment. Besides the almost certainty of a larger or smaller cicatrix being left, in one of his cases it occasioned very serious sloughing of the neighboring parts; objections to its employment about the face and neck of a very decided character.

Under these circumstances, I feel desirous of drawing attention to the above examples, that others may put to the test the value of iodine in these troublesome malformations of the skin, and which, if they would kindly give me the result of their trials, I should esteem it a favor.—[*Medical Times and Gazette.*

Sugar and Salt as a local Solvent in Chronic Congestion of the Cervix Uteri.

To the Editors of the New York Medical Times:

GENTLEMEN—The following novel method of reducing the congested state of the cervix uteri, which is so commonly met with in the chronic affections of this organ, accompanied by discharge from the os and "ulceration" of its mucous surface, has been so successful in my hands, and in the practice of several gentlemen to whom I suggested its use, that I desire to make it more generally known through the pages of your journal. The plan of treatment of which I speak, originated, I believe, with M. Caudmont, of the *Ecole Pratique*, Paris; at any rate, whether original or not with him, it first came to my knowledge, four years ago, from his practice at his private clinique, and I have been unable to trace it to any other source.

The following is the method of its application:—The os uteri having been exposed by means of the speculum, equal parts of sugar and common table-salt, finely pulverized and mixed, are impacted around the vaginal portion of the cervix uteri, and retained in place by a pledget of lint or cotton wadding, moulded into the form of a *godet*, or small cup, and having a string attached to its convex surface to facilitate its subsequent extraction. Thus applied, it is left *in situ*, and the patient is directed to withdraw the plug, by means of the string attached, in the course of twelve or twenty-four hours.

Its effects are to produce a very copious discharge from the parts to which it is applied: so much so, indeed, that patients should be cautioned to take means for the protection of their linen; and at the following examination the cervix is found to be greatly relieved of its swollen state due to the products of congestion, and much reduced in size.

The most obvious explanation of the action of this application

would appear to be found in the principle of exosmosis. Its advantages over the use of leeches, or potassa fusa, to accomplish the same purpose, are obvious. It is exceedingly simple and speedy in its action; it is attended with no danger of injury to the neighboring parts or of hemorrhage; it attains the end with but little pain or inconvenience to the patient. Moreover, the experience of several gentlemen, enjoying a large field for observation in the treatment of uterine diseases, whom I induced to make a trial of Caudmont's method, confirms the result of my own practice, viz: that it is even more efficacious as a solvent than the ordinary applications in chronic congestion of the cervix uteri.

Respectfully Yours,

July 12, 1855. F. J. Bumstead, M. D.

Ligature of Arteries. By W. J. C. Duhamel, M.D.

Having been prompted by some degree of curiosity to investigate the application of various ligatures, and believing that different material exercises different influence upon the artery to which it is applied, I find from inquiry, in experiments made, that those most applicable in practice are—catgut, silk, prepared and crude flax, hempen threads, and hair.

The catgut, when applied as a ligature, is, doubtless, the most strong and homogeneous. Experiments show that even in arteries of small diameter it has sufficient strength to compress and divide its proper coats, but it differs from other ligatures, as it does not always divide the internal wall at the moment the knot is formed. In some instances, the catgut was thought to have been absorbed, and in many instances it was found so much softened that little doubt could be entertained of its progressive absorption.

More experiments have been made with silk than with any other material, both in the manufactured and crude state, untwisted threads, &c., applying them not thicker than human hair; the only difference in the results was, that manufactured silk, left on an artery, lost its artificial color, while the unprepared maintained the color natural to it. When compared with catgut, silk ligatures produce much more irritation, and excite suppuration more frequently, although in many cases simple adhesive inflammation alone was produced.

Like the catgut, they are first covered with plastic lymph, then connected with the cord remaining between the two extremities of the artery, or they lie bare between the layers of the common cellular tissue, or become encysted. If not thrown off, the silk may remain inert during life; yet in some cases it has been demonstrated that after a long time it becomes softened, and may be absorbed. No difference was found between slender ligatures of linen or hempen thread; they have been found no more irritating than silk. Of experiments made with black horsehair (single or double), the only difference of such from other ligatures is, that

they preserve their physical properties unaltered, and still remain in the body innocuous; human hair likewise. The following table will show the result of the application of some 300 various ligatures and methods, and of the pathological conditions induced by them in arteries.

1. *Quality.*			
Catgut			80
Silk			120
Thread			60
Hair			40
2. *Methods.*			
Circular ligature			140
Loose ditto			70
Double ditto			45
3. *Animals Experimented upon.*			
Dogs			65
Sheep			24
Goats			12
Calves			2
Horses			13
Asses			5
Rabbits			8
4. *Arteries.*			
Carotids			110
Subclavians			32
Brachial			14
Iliac			19
Femoral			80
5. *Time Left.*			
1 to 30 days			44
1 to 3 months			61
3 to 6 months			48
6 to 9 months			54
1 to 2 years			29
2 to 3 years			18

6. *Result.*

Catgut	80	disappeared	33	
		remained		47
Silk	120	disappeared	19	
		remained		101
Thread	60	disappeared	10	
		remained		50
Hair	40	disappeared	2	
		remained		38
			64	236

7. *Effects in the 236 Ligatures which remained.*

1st.	Covered by lymphatics—cellular substance	29
2d.	Attached to the cord between the ends of the artery	60
3d.	In common cellular tissue	67
4th.	Encysted	54
5th.	Forming abscesses	26
		236

WASHINGTON, D. C., June 23d, 1855. [*N. J. Med. Reporter.*

Observations on External Pressure as a means of relieving Excessive Epistaxis. By L. SHANKS, M. D.

A communication, published in the Boston Medical and Surgical Journal, from Dr. Cartwright, of New Orleans, on the efficacy of external compression by means of a tourniquet and pad applied over the alveolar process, in case of hemorrhage from the sockets whence teeth have been extracted, has induced me to present to the profession the result of my experience with a similar remedy in excesssive hemorrhage from the nose, which I have used with great success for several years, though I have not seen it mentioned in any publication on the subject.

The remedy alluded to consists of two compresses, made of old linen or cotton, firmly rolled, about an inch or an inch and a half

in length, and the thickness of an ordinary-sized thumb. These compresses to be applied on each side of the alæ-nasi, and extended down to the edge of the lip, and then firmly pressed against the superior maxillary bone and its alveolar process, by means of a narrow bandage passed over them, and tied on the back part of the head, or carried round the head, tightly drawn, and secured in its place by one or two cross turns of the bandage over the vertex and under the chin, to be pinned at the place of crossing, to keep the dressing in situ, and preserve the necessary pressure over the naso-labial compresses.

This dressing, when properly applied, interferes but little either with respiration or mastication, and therefore may be continued as long as necessary without inconvenience.

For several years, in obstinate cases of epistaxis, I have used this remedy for its arrestation, with prompt and uniform success. Its effect in the entonic or active, and the atonic or passive forms has been equally successful.

The success of external pressure upon the labial branches of the external maxillary artery, tends to prove that they supply the blood to the vascular schneiderian tissue, in cases of profuse and continuous epistaxis.

Though the supply of blood is attributed by writers on this subject to the internal maxillary arteries, I was induced to believe otherwise, from the throbbing in the labial artery, near the alæ-nasi, produced from the temporary suspension of epistaxis, by plugging up the side of the nares whence the blood issued; and the remedy of pressure over that artery was suggested from observing the increased determination of blood to the nose through these vessels.

In cases of epistaxis and hemorrhage from the sockets of teeth, there are two prominent reasons why external pressure succeeds better than the internal from plugging of the cavities.

First, the external pressure cuts off or prevents the increased determination and chief supply of blood; and secondly, the cavities whence the hemorrhage proceeds are diminished by this external pressure, and the vessels and their ruptured and gaping mouths are diminished and closed.

The expansion of all cavities from which hemorrhagic discharges of blood proceed, tends to widen the trunks and bleeding mouths of the ruptured vessels, and to increase the flow, unless sufficient pressure is made at the proper point to close permanently the patulous opening.

In addition to the greater success of external pressure, demonstrated by its affording prompt relief in cases where all or most of the other means recommended in the books had been unsuccessfully tried, there is another thing in its favor of great importance. It may be used without any serious annoyance or inconvenience to the patient, and continued until all danger of a return of the hemorrhage is removed.

In illustration of this effect of the external pressure described, I might report many cases; but as the object is merely to suggest this simple remedy for an affection sometimes exceedingly uncontrollable, and troublesome to the physician, and annoying and injurious to the patient, I shall only mention one case.

Last summer I was requested by a gentleman to visit a negro man who had been reduced very much by a tedious attack of typhoid fever. When he was considered convalescent, hemorrhage from the nose commenced, and had continued several days almost constantly, although most of the ordinary means had been tried to arrest it. He was so weakened and exhausted, and his blood so much attenuated by the hemorrhage occurring in his debilitated state, that his master despaired of his recovery.

I applied the naso-labial compresses, and a strip of soft domestic, folded so as to be half an inch wide, at the part placed over the lip and compresses under the nose, and tied it tightly on the back part of the head. Another strip was applied under the lower jaw, carried over the first and tied on the top of the head.

The two strips were then pinned at their crossing, so as to secure the dressing in situ, and preserve the necessary pressure from the first, over the compresses.

The hemorrhage was immediately arrested, and under a course of tonic treatment he gradually recovered, without having but a slight return of hemorrhage the next day, from the bandage becoming too slack, which was arrested by tightening it. The bandage and compresses were kept on several days, and directed to be tightened if there was any recurrence of hemorrhage.

In this case the hemorrhage was not only permanently arrested by the simple means adopted, but doubtlessly the life of the patient was saved by it. No other means could probably have been resorted to, in his extremely debilitated state, that would have arrested the bleeding, without interfering too much with respiration, medication, and the nutrient support of the system necessary to his recovery.—[*Memphis Medical Recorder.*

Alleged Cure of Cancer.

M. Landolfi, chief surgeon of the Neapolitan army, has of late attracted much attention in Italy and Germany, having seemingly cured cancer by means of the topical use of chloride of bromine, in combination with several other chlorides. This success has produced such sensation as to induce the Emperor of the French to give the author six beds at the Salpêtriere Hospital (where the insane and aged of the female sex are admitted), to afford him a fair opportunity of proving the efficacy of the remedy. This is the right, practical, and sensible way of dealing with such questions. We are in the mean while bound to state that *L'Union Médicale*, of May 1, 1855, contains a letter from M. Leriche, of Lyons, who says that he has strong doubts about the actual *bonâ fide* cancer

having ever been cured by the above-named application, as he has steadily used the chloride of bromine for ten months, in various cases of cancer, without having succeeded in warding off the fatal issue of this formidable disease.

The formula of the paste used by M. Landolfi, is the following: Chloride of bromine, three parts; chloride of zinc, two parts; chloride of antimony, one part; chloride of gold, one part; powder of liquorice sufficient to make into a paste. The principal agent is the chloride of bromine, which has lately been used by itself. Cancers of the skin, the epithelial variety, lupus, &c., are treated by a combination of chloride of bromine with basilicon ointment. M. Landolfi's view is to change a malignant ulceration into a simple one. For this purpose, he formerly left a piece of linen spread with the paste as long as a fortnight upon the part, but now he uses imbricated pieces of lint, similarly spread, and leaves them only twenty-four hours. The surrounding parts are protected by an ointment composed of one drachm of chloroform to an ounce of axunge. The author considers that the chloride of bromine acts not only topically, but that the specific is absorbed and aids the cure. Hence he gives, as an adjuvant, a certain number of pills which contain a minute proportion of the chloride. When the pledgets spread with the caustic paste are taken off, after the above-mentioned twenty-four hours, a line of demarcation is observed which separates the altered from the healthy tissues. Bread poultices are then applied, or else lettuce leaves, or basilicon ointment, which should be changed every three hours, until the eschar is thrown off, which event takes place from the eighth to the fifteenth day.

Numerous experiments have been made in Italy and Germany, and some successful cases have been recorded. It should be added, that there is much fairness about the proceedings; M. Landolfi does not choose the cases, is anxious to make the remedy extensively known, and publishes the unfavorable as well as the favorable results. The Committee appointed in Paris to report respecting the experiments at the Salpêtriere, is composed of the physicians of the hospital, Drs. Moissenet, Cazalis, and Manec, assisted by MM. Mounier, Broca, and Furnari. This report will be an important document, as the diagnosis will no doubt be very carefully made; but the question of recurrence can only be solved by investigations spreading over several years.—[*Medical News.*

Cantharadine Ointment in Open Cancer.

Dr. Remy strongly recommends an ointment consisting of 10 parts of powdered cantharides and 30 of lard. It is applied on charpie night and morning. It rapidly induces temporary cicatrization of even deep ulcers, and by its palliative employment cancers may be maintained within moderate limits for a long period of time, and the exhaustion of the powers of the patient so much delayed.—[*Ibid.*

Iodine and Nitrate of Silver in Cutaneous Inflammations. By J. H. NUTTING, of Orford, N. H.

The use of these two remedies in erysipelas is too common to need notice. But, so far as I know, they are not generally used together, one or the other being applied by itself. It is to the simultaneous use of both that I wish to call attention.

If the tincture of iodine be applied to the surface, and immediately after the nitrate, a chemical union of the two takes place, and the resulting compound is of a dull white. The same takes place if the solutions are mixed in a phial. Of the chemical change thus effected and the compound formed, I am not certain.

During the epidemic erysipelas which prevailed some time since in this region, Dr. Knapp, of Dummerston, Vt,, first accidentally applied the tinct. and nitrate together. He found that while the application was less painful than of the nitrate alone, it was more efficacious in arresting the ulcerative action. He afterwards fully tested this mode of applying these remedies during a pretty extensive practice among it for three years. He also used it successfully in the sporadic cases.

On his recommendation, I used the same application in several cases (of course, with general treatment), and found it prompt in checking the spread of the inflammation, and in restoring the surface to a healthy state. I had an opportunity to compare it with the effect of blisters in checking this action. In one patient, with a local manifestation of the disease in the hand, under the advice of some good old lady, a blister was applied, in my absence, to the back of the hand. It filled well, and was soon *filled* with the extending ulceration. The application of the tinct. and nitrate to the palm at once checked it, as it also did on the back of the hand.

I was subsequently called to attend a boy with an eruption in large patches about the loins, and covering about half the circumference of the body. I do not now remember the exact character of the eruption. There was some constitutional disturbance, which was treated with salines, and astringent and cooling lotions to the part. These produced little effect on the eruption. I then applied the tinct. and nitrate to about half the surface, and the next day found that drying up, and presenting a better appearance. I then applied it to the whole, and two days after, he returned to his work free from trouble.

About ten days since, a young man in my family passed through some ivy, and in a few days the whole of the leg, from the nates to the heel, was a blistered surface, and swollen to double size. There was considerable disturbance of the system, and the pain was so severe as to prevent sleep. After trying the usual applications, without effect, and the tinct. of iodine, I next tried the nitrate alone on a part of it. This had little effect besides waking up his sensibilities for a while. The next day, seeing no amendment, I had an assistant brush the whole surface over with the tincture,

while I followed with the solid nitrate. The pain from this was less severe than from the nitrate alone; and after the smarting subsided, the pain entirely left him. The next day the surface was drying up, and there was no progress of the poison, except at one or two points. These were now touched in the same way, and the next day he was up and dressed for the first time for a week. The œdema disappeared from the thigh, and has now wholly left the leg and foot. I have rarely seen so severe a case of poisoning from this cause. Were I to see another, I should at once try this application as the *topical* treatment.

These cases are not enough to establish the superiority of the application over others; but so far as they go, they give it a claim to attention. My own conclusion is, that used in this mode the pain is less, and the effect more speedy and certain, than if used alone.—[*Boston Med. and Surg. Journal.*

The Great Importance of Nourishment in Fever. By Dr. Stokes.

I wish also strongly to impress on you the great importance of the use of other forms of nourishment in this disease; for we must not only keep up the nervous energy of the system by wine, but we must support nature by food. There is no mistake more fatal in fever, than the withholding of food. I was early taught the importance of the use of careful nourishment in fever, by my friend and colleague, Dr. Graves. I remember once, Dr. Graves, when speaking of the necessity of the use of nourishment in fever, made use of these words: "If you are at a loss for an epitaph to be placed on my tomb, here is one for you—*He fed fevers.*" In addition to the prejudices with which the inflammatory doctrine imbued so many minds, with respect to the use of food in fever, there was a new set of arguments raised against it, in consequence of the experiments of an American physician. I allude to the case observed by Dr. Beaumont, and so often quoted since. In this remarkable case, various medicinal substances and articles of food were introduced through an external fistula into the stomach, their effects being noted, as also the conditions of temperature, vascularity, &c. A set of results were subsequently published in connection with the action of the stomach upon food. One of the results stated to have been thus obtained, was that the existence of the state of fever altogether suspended the process of digestion. Here was a statement which had the appearance of being the result of strict observation. It influenced a number of young men; but did it influence those who had once been in charge of a fever hospital? Not at all; because those men knew very well that, no matter what Beaumont might say about the stomach not digesting when the patient had fever, in thousands of cases patients in fever digested remarkably well, required food, and derived benefit from it. In a large number of cases of typhus

fever, the stomach has an excellent power of digestion; and, I believe, if we were bold enough, we would find that many articles of food usually forbidden to fever patients, might be given to them with safety.—[*Ranking's Abstract.*

New method of introducing medicines into the system, more especially applicable to painful local nervous disease.

Dr. Alexander Wood has been led to introduce solutions of morphia and Batley's sedative solution into the cellular tissue, as near as possible to the affected nerve, by means of the small perforating syringe, constructed by Mr. Furguson of Giltspur street, for injecting aneurism with perchloride of iron. Dr. Wood narrated nine cases in which he had employed this method of treatment, in all with perfect safety, in some with complete, in others with partial success. As to the *modus operandi* of this method of treatment, he endeavored to show, from the experiment of Muller and others, that the effect of the local application of opium to a nerve was to destroy its sensibility at the part, and that from this action of the drug the immediate cessation of the pain arose. He then pointed out the rapidity with which absorption appeared to take place from the cellular tissue, which seemed to account for the rapidity of the narcotic effect which a small dose of, so introduced, was found to produce. He also pointed out, that other medicines might be introduced in the same way.

Dr. W. T. Gairdner mentioned, that a patient in his wards in the hospital, had been injected the other day in the way recommended by Dr. Wood. The result was not decisive, as the complaint for which the man was under treatment, viz: lumbago, had been undergoing rapid amendment, and, indeed, the day after the operation, was nearly gone. The experiment, however, was attended with little suffering, and it was noted that some degree of giddiness was almost immediately produced.—*Monthly Jour. Med. Science.*

Common Salt.

Dr. Hutchinson, in the New York Journal of Medicine, ranks this remedy before arsenic in the treatment of intermittents, and thinks that in a majority of cases it may be successfully substituted for quinia. He gives it in combination with slippery elm. in the proportion of three ounces of the salt and three drachms of the elm, to eight ounces of boiling water; which forms a saturated solution. The dose is a table-spoonful every two or three hours during the apyrexia. Besides considerations of economy, its use is to be preferred in cases where the quinia causes unpleasant constitutional effects. We made some experiments with this remedy before the medical class, in the Dispensary of the Memphis Medical College, and in a large majority of cases in which our prescrip-

tion was followed, it proved successful. The plan we pursued was, to combine with a drachm of salt, a few grains of powdered bark, or colombo, and direct such a dose to be taken in a small cup of water, every two or three hours during all the period of intermission. But when it came to be discovered, by the patient's applying at the Dispensary, what the remedy was, it was impossible to continue the treatment in consequence of their want of confidence in it. Some fifty or sixty cases, however, were cured by this means alone, although in several others it failed, and we had to resort to the quinia. It can scarcely be doubted that common salt possesses important antiperiodic power.—[*Memphis Med. Rec.*

A plan for the Radical Cure of some cases of Inguinal Hernia. By Patrick H. Cabell, M. D., of Selma, Alabama.

Of the different means by which it has been proposed to solve that difficult surgical problem—the cure of reducible inguinal hernia, none appears more rational nor offers fairer chances of success than Dr. Gerdy's method of invaginating a fold of skin into the inguinal canal. The principle of this operation is certainly correct. It aims at obstructing the abdominal ring, the insufficiency of those operations which simply produce adhesions in the sac having long since been tested; the only difficulty is in the execution.

I wish to describe a form of truss which I think calculated to obliterate the inguinal opening in ordinary cases of oblique hernia.

In place of a pad, the inguinal branch of the ordinary truss is made longer than usual, and to its extremity is attached a rounded cylinder of soft wood, designed to be inserted into the canal, pushing a fold of the skin of the scrotum before it. This finger-like projection of wood is kept up by the pressure of the spring, the displacement is prevented by the circular strap and thigh strap.

When the pouch of skin seems to have adhered in its new situation, the surface of the "cul-de-sac" is to be denuded of its epithelium, and then its sides brought together by an ordinary truss with a long pad resting over the invaginated portion.

I do not claim any thing new in this method, and am far from vaunting it very highly, for the cases in which I have used it have not been long enough under treatment to enable me to decide on the permanency of the cure, but I think it cannot be unsafe, and it is free from some of the objections of the ordinary methods, as the patient can walk about during the treatment.

I propose it, then, with much diffidence, hoping that it will be tried by surgeons if they have nothing better.—[*Virginia Medical and Surgical Journal.*

Dilatation of the Os Uteri by Chloroform Ointment.

Dr. Ronald succeeded in dilating a hot and rigid os uteri by means of chloroform ointment. Bleeding to syncope, tartrate of

antimony and hot bath having failed, Dr. R. prepared an ointment consisting of a drachm and a half of chloroform, intimately mixed with an ounce of simple cerate, which was freely applied to the external surface of the neck of the uterus. It produced a slight smarting pain, which soon passed off; in 20 minutes dilatation of the os uteri commenced, and in one hour and 27 minutes, delivery was accomplished.—[*West. Jour. Med. and Surg.*

EDITORIAL AND MISCELLANEOUS.

Dr. Wm. J. Holt.—We have had the pleasure of perusing a letter received from an officer attached to the allied army in the Crimea, who was wounded at the battle of Balaklava, and taken prisoner by the Russians. Sent to the Hospital at Simpheropol, this officer was placed under the professional care of our esteemed fellow-townsman, Dr. Wm. J. Holt, and finally recovered from his wounds, which were so severe as to have been at one time considered fatal. This officer speaks in the highest terms of Dr. H.'s skill and standing in the army, and states, among other interesting facts, that the Emperor of Russia has conferred upon Dr. Holt the Knighthood of the order of St. Anne, as a testimonial of his high regard. Dr. H. is now stationed at Eupatoria, and attached to the staff of the commander at that place, having been compelled to leave Simpheropol in consequence of the impairment of his health. We are happy to add, that our friend's health had been entirely restored by the change of air. We sincerely hope that he may be spared to return to his native land, and to enjoy the congratulations of his numerous relatives and friends in this city.

Savannah Medical College.—We have received the Circular of this Institution, together with the Address delivered at the Commencement in March last, by Henry Williams, Esq. The Class at the last session numbered forty-nine, of whom seventeen were graduated. Mr. W.'s address is an able and chaste philosophical disquisition upon the intellectual progress and destiny of mankind, which we read with much pleasure.

Fleming's Hygienic Journal.—We have received the first number of this periodical, published at Atlanta. It is very creditable to the Editor, and will doubtless be read with interest by the profession. We cheerfully add it to our list of exchanges.

Necrological.—We learn, with regret, the demise of Professor Elisha Bartlett, the distinguished author of the American work on Fevers, &c. Also, that of Dr. Martin Barry, celebrated for his researches in Embryology and other subjects.

Dr. John W. Paxton has opened, in Knoxville, Tenn., an Infirmary, under the name of "Hotel for Invalids." We wish the Doctor success in his undertaking.

Case of Double Uterus; both Impregnated.—Dr. J. T. Kannon states (New Orleans Med. and Surg. Journ., May, 1855) that he was called in consultation to see a woman who had been delivered early in the morning of a child. There were still all the external appearances of another child remaining, the womb being entirely empty, the placenta having come away. Owing to great prostration consequent upon the birth of the child, and the womb being empty, Dr. K. supposed that laceration had occurred, and the fœtus had escaped into the cavity of the abdomen.

He passed his hand into the empty womb, and found its walls solid, not the least appearance of a rupture having occurred. The probability of a septum with a double womb suggested itself to his mind, and further examination revealed the correctness of this opinion. Looking upward and forward, near the edge of the symphysis pubis he found the os uteri of another womb, with the head of the fœtus resting directly on the pubis. There was no effort making on the part of the womb to expel the fœtus, and the usual remedies failing to bring on the pains, an attempt to turn and deliver was tried; but the peculiar position occupied by this second womb rendered it very difficult. As by this effort it was discovered that the fœtus was dead, he resorted to the crotchet, and brought away a child weighing six or seven pounds.

This lady was the mother of five children, but never previously had both wombs been impregnated at the same time. The septum was horizontal, with the os tincæ of the lower and posterior womb in the natural position, the anterior considerably elevated.—[*American Jour. of Med. Sciences.*

Pregnancy sine Immissione Membri.—Dr. Börleben, of Hildesheim, has placed on record an instance of impregnation without admission of the male organ. A young woman, about twenty-seven years of age, had been in labour of her first child forty eight hours, when he was called to see her by the midwife in attendance. Dr. Börleben found the passage of the child's head obstructed by a strong thick hymen, which on full stretch only presented an orifice of an inch and a half at its greatest diameter. An incision having been made, delivery was speedily accomplished.

Dr. Börleben was informed by the husband that he had never been able to effect penetration. His prepuce covering his glans penis, he suffered acute pain, consequent on retraction of the prepuce, on every attempt to consummate sexual union. No defect, as to formation or size of the penis existed.—[*Casper's Vierteljahrsschrift. British and Foreign Med. Chir. Review.*

Prevention of the entrance of air in Paracentesis Thoracis. By Dr. T. Walker, of Peterborough.—Let a piece of quill, fitted to the tube of the canula, be prepared by wrapping round it and securing with a bit of thread, a small piece of thin wash-leather, or sheepskin, rendered limp by wetting it. Immediately on withdrawing the trocar, this quill is introduced into the canula: the wet leather forms a pendulous prolongation of the tube, an inch and a half long, or a little more, through which the fluid will flow freely; but the moment that the slightest act of suction takes place, which,

as the chest gets empty, invariably happens, it will act as a valve, and prevent the possibility of any air entering by the tube of the canula.

Of course, the ordinary precautions to prevent the admission of air through the opening made by the trocar, either before or after the puncture, are not neglected.—[*Assoc. Med. Jour.*

Recent Chemical Discoveries.—A recent chemical discovery proves that alcohol may be made synthetically from coal-gas (and probably other carbo-hydrogenes) and water. If the discovery prove remunerative, it may very much modify the expense of quinine prepared by alcohol, tinctures, and ether of all kinds, and would, we are sure, be a welcome boon to curators of museums and others. The eminent pharmaceutical chemist of Dublin, Donovan, lately took advantage of the ice and snow, so plentiful in that city, to examine into the properties of some pharmaceutical ethers, which would be impossible without large masses of ice and snow; among the rest *chloric ether*, now so frequently found in prescriptions. This able chemist states, that there is no such compound at all as chloric ether, and what is known as perchloric ether, detonates violently by even shaking the bottle. Surgeons prescribe chloric ether, but the patient gets Dutch oil, more generally, chloroform in an insoluble state, or spirits of wine; but the nearest approach to chloric ether is muriatic ether, which he succeeded in obtaining, or perchloric ether, which he gives a caution not to use, as it explodes.—[*London Lancet.*

New Treatment of Coryza.—In the Journal de Médecine et de Chirurgie Pratiques for November, 1854, M. Yvyonneau says that he has obtained great success in coryza by plugging up the external nares by introducing a plug of lint rolled in collodion. The organ, he says, is protected from the contact of cold air, and at the same time the disordered surface is bathed in warm air, and the moisture exhaled in respiration. The remedy has, in his hands, never failed to produce a cure in twenty-four hours.

[*Western Jour. of Med. and Surgery.*

Tasteless Infusion of Senna.—Dr. Brandeis recommends a cold infusion of senna for twelve hours in a covered vessel, as especially useful in infantile therapeutics. By this modification of the process usually employed, the water contains only the cathartic and the coloring matter, leaving the essential oil, the fatty matter and the irritating resin, which are soluble only in hot water. Senna water thus prepared cold, is almost insipid, and its taste completely disappears when mixed with infusion of coffee or tea.

[*Archives Gén. de Med. Peninsular Jour. of Med.*

Cupping.—Dr. Whitfield, of Gainesville, Ala., suggests, in a letter to the editor, that it is an improvement in cupping, to stick with wax in the bottom of the cup a bit of sponge, upon which the alcohol may be dropped. All risk of burning the patient is obviated by this plan, which is adapted to all cases in which the cup can be applied vertically.—[*Memphis Medical Recorder.*

Hiccough.—Dr. Upsher, in the Virginia Medical Journal, says, "this symptom is the result of spasms of the diaphragm, and can be relieved by a bandage applied tightly around the lower part of the thorax, which re-

laxes the diaphragm and causes a cessation of the spasms. This plan has given relief when every other had failed. It may also prove of much assistance in relieving cases of chronic vomiting, not depending upon organic disease of the stomach."—[*St. Louis Med. and Surg. Jour.*

Impotence.—Dr. Schulz details in the *Wiener Wochenschrift*, a number of cases of impotence, which he has treated successfully by means of electricity applied to the peripheri extremities of the nerves, on the glans, the dorsum penis, the scrotum, etc. One old gentleman, in particular, is mentioned, who had not had an erection for fifteen years, whose penis assumed a state of formidable turgescence under the discharges of Dr. Schulz' battery.—[*St. Louis Med. and Surg. Jour.*

Spirits of Turpentine and Nitrate Potash in Snake Bites.—Dr. Wm. Hanley, of Napierville, Illinois, reports in the North Western Medical and Surgical Journal some cases of snake bites, one from the rattle snake, which he thinks were relieved by 30 drop doses every half hour of a mixture of spirits turpentine, saturated with nitrate of potash. This was also applied to the wounds and in friction to the limbs bitten.—[*Nashville Med. Jour.*

Statistics of the Medical Profession.—Professor Escherich, of Wurtzburg, has just published tables which would establish that the mortality is greater amongst medical men than in other professions. The author takes an aggregate of 15,730 persons belonging to the following classes:—Medical practitioners, Protestant and Catholic clergymen, professors, schoolmasters, the bar, and those employed by the Board of Woods and Forests. He finds that three-fourths of medical men die before the age of fifty, and ten-elevenths before sixty. Out of 1168 medical men alive in 1852, four only (8.34 per cent.) were more than eighty years old. The ten oldest practitioners numbered together 792 years, whilst the ten oldest men taken from any of the above-stated professions presented much higher figures. Catholic clergymen numbered 872 years, professors and schoolmasters 875, and Protestant clergymen 865. Out of 100 medical men, only twenty-six had reached fifty years; and it is well known that, according to Casper's statistics, the proportion is less favorable in Prussia, as only nineteen per cent. reach the age of fifty.—[*London Lancet.*

The Consumption Curers of New York. By an Invalid M. D.

With regard to life it has been said by a late writer, that "we persuade ourselves that it teems with novelties and delights; that it abounds with high festival days and gala shows, somewhere in happier regions, although they come not to us." This remark is especially true with regard to the hopes and expectations of the invalid.

Art may fail him at home, measures which he must feel are well directed, may disappoint, friends may mournfully walk around him; still his mind at times overleaps all, and loves to revel in the idea that somewhere, in some unknown land, there lives the mind to conceive, and there exist the remedies which it can direct, for his recovery.

The sweet solace of the mind, Hope, as every one knows, is the constant attendant on consumption, where it is, indeed, a heavenly visitant. Wasting day by day, who has not seen the wretched victim letting go the greater hopes of yesterday, which may have pointed him to a complete recovery,

but to cling the faster and with as sweet content to those of to-day, although they promise only a partial convalescence.

I cannot conceive of a more beautiful dispensation of providence than this. Round and round in a narrowing circle, day by day, but nearer the end, yet there is always hope that the last thing tried, despite of preceding failures, will prove just what is wanting. So sweet a comfort the pitying angel must send for a good purpose. But so much good comes not unmixed with evil; for this very buoyant feeling of hope is taken advantage of by designing men, whose promises to furnish remedies to suit every case, are only equalled by the extent of the popular credulity. I believe that it is in ignorance, that such deceive the afflicted. If there are any who do it knowingly, who *will* take advantage of this heaven-born feeling for the purpose of money-making; to them I have but to say with Othello:

> Never pray more: abandon all remorse,
> * * * * * * *
> For nothing canst thou to damnation add,
> Greater than that.

Messrs. Editors, guided by just such feelings as I have attempted to describe, I directed my footsteps to the great city of New York. I have a large cavity in the upper part of the left lung, and I had been told with a sad voice and a firm aspect, by one whom I loved and had every reason to respect, that softening had already begun in the apex of the opposite organ; and I am emaciated to the last degree. Nevertheless, from the glowing accounts which I had heard of the wonderful power over the disease, possessed by numberless men in this great commercial emporium of our Union, I resolved to proceed thither at all hazards.

My mind was filled with vague, but most embarrassing hopes, shadowy outlines of superhuman skill, in men, high above their fellows in point of pure humanity and disinterested devotion to the science of life, flitted before my morbid vision, giving me strength to endure the journey.

Two great parties I found engaged with equal zeal in this important work. The one I shall describe as the constitutional class, or those who adopt a general treatment; the other the local, or those who adopt a strictly topical method of cure. I had been educated in the former school, and did not tarry long with its professors.

Improve the nutrition,—cod liver oil—good diet—much out door exercise,—measures which I knew had saved me so far, were all they could tell me about, but knowing all this before, I was not satisfied, and wished to go farther; for these I found were not the men who were doing so many wonders. I diverged a little into the intermediate class—a sort of divining doctor, by spiritual agency—who had an immense run, as I learned, among the clergy. The Dr. was overrun with patients—his ante-room was like the lobby of a theatre on the night of a popular actor's benefit.

I took my seat, and abiding my turn, it came at last. I found behind the scenes, one having the air of "a most prosperous gentleman," who looked through my case with an imposing flourish—smiled approvingly—received a fee,—I thought an enormous one—and bade me follow him and I would be well. Conducting me back into the ante-room, he sang out some words in an unknown tongue to a clerk near the window, who wore a remarkably stiff standing shirt collar, and then, with a graceful wave of the hand, withdrew. This latter person at once handed me a package of medicine, already neatly put up in a handsome paper box. Ah, said I in

surprise, did you have it ready? Yes, said the clerk, carelessly, I saw you come in, and whilst you were waiting to see the Boss, I put it up. Then, rejoined I with warmth, you knew beforehand what he meant to give me?

The clerk with a stiff standing collar, thrust his tongue into his left cheek, drew the lower lid of his right eye grimly down, with his ring finger, leered at me significantly, but with much good nature, and I departed, I trust, a wiser man.

After visiting a man who had told me that he had enjoyed the honor (hitherto unknown to Americans) of being the physician for many years to her majesty, Victoria, queen of England, and that he had a book which he sold for 12½ cents, which would tell me how to cure myself of my disease as well as he could; and which I did not buy for reasons which must be obvious; I became disgusted with this whole class, and having no other alternative, threw myself into the arms of a Topical party, with hope still undiminished.

But in this there was some difficulty, for I found two parties, and which to select perplexed me some. The one I shall characterize as the *Probangers*, the other the *Inhalers*. From what I learned, the history of these parties is possessed of no little interest.

It appears that the Probang, and its accompanying sponge and caustic, were not originally used to cure consumption. In simple throat affections however it had had an immense run. Clergymen every where had tried it, and such of their flocks as they could influence had followed suit, and the whole thing became rapidly much in vogue.

Finding how easily it went down the throats of the people, it bye and bye took a bolder stand, and stoutly proclaimed its power to cure consumption, in its most common form. Still, it must be remembered, in all this time it never claimed to go beyond the bifurcation. But we all remember how popular it was, and what vast sums of money it must have made.

Whether it was the latter, which is a great stimulus to invention, or some higher motive, it is certain that this thing did not pass unnoticed. Active minds were at work, and vigorous intellects became engaged in tapping this rich mine, and in pushing farther the investigation. As the result of all this, inhalation turned up. The probangers were taken on their own ground—the people were told that if topical treatment, so partially applied, was successful, how much more were they entitled to expect from a method making the whole lung accessible to medical agents. The reasoning was plausible—the thing took—Probangdom tottered to its very base, and inhalatian became the rage.

But our friends were not to be put down in this manner; they were penetrating men, and at once saw that all they had to do was to go a little deeper. The old idea of the bifurcation, being the limit of the probang, was therefore abandoned, and it was proclaimed that cavities could be in vaded and sponged out, and that inhalation could not dare do more than it.

This was the state of things at the time of my first visit, and it was this which led to my perplexity already spoken of.

But as I had already (as every body else almost have done in my situation) used the probang, as far as the bifurcation, as it was said to have been applied, I at length decided upon inhalation, and repaired without delay to its head quarters in the city. The Doctor received and examined my case

with exceeding care. At home, my medical friends could perceive at a glance, as they told me, by the flattenning of the left side of the chest, and by its quiescence during respiration, the nature of my disease, but these signs were not sufficient for my new adviser.

He stripped me to the skin, measured, percussed and auscultated, over and over again every part. I never saw so much pains, and would have thought some of his manipulations indicative of decided "greenness," but for the exalted reputation and obviously large experience of the operator. He found my case a very beautiful one—I was, he said, just enough diseased to test the full power of his method. In the course of his remarks, however, it turned up that this person was not the genuine man so widely known, and I dressed myself with some show of indignation. He took my complaints very quietly, and showed me into the next room. The person who there received me won my heart. He showed me around, examined my case, predicted "a good time coming" for me soon, but in the midst of it all, announced himself as only an assistant, and appeared greatly surprised that I should think any thing of that. I stamped in rage, and announced that I had come all the way from Virginia just to see the genuine article, and would not be satisfied with any substitute. This gained me admission into the great man's presence. I found him superb. My account of my reception amused him much, and we became unreserved and quite intimate.

The fact was, he told me, that these fellows had come well recommended to him,—the business had prospered in their hands—he was no judge of qualification—didn't pretend to it—had seen an opening for it, had got the business up, and managed only the advertising and money department. In short, said he, I am only the capitalist of the concern. The little fellow you first saw, he furthermore proceeded, is I think myself, a little too fussy over the chest, but the other one, I do think, is *nice* for the throat.

I had one other chance, which was to have my cavity sponged out. The Doctor told me my case was a beautiful one for the treatment. I admired his ingenious arguments in favor of his method, and was quite carried away by his charming description of the *rationale* of the whole operation. When he finished, I announced, with enthusiasm, that I was a convert to his views, and pronounced myself ready at any moment for the operation. He examined me again with greater care, and with a faint touch more of gravity in his countenance. It was just the thing for my case, said he, and would have to be done, but not then. You get back home, he proceeded, and *get a little more strength*, and then return, and I'll perform the operation for you.

One hour afterwards, feeling as a doomed man, I left the great city of New York. The consumption curers have taken from me all my bright hopes, and left me but a mockery.—[*Virginia Med. and Surg. Jour.*

ERRATA.—In Professor Kollock's article, published in our last No., on page 458, 18th line from top, for "attenuated," read "*alternated.*"

On page 458, 13th line from bottom, for "pum virg." read *prun. virg.*
" " 459, 2d " from top,, for "to-night to hypochondrium," read *to right hypochondrium.*
" " 459, 6th " from top, for "Jeteric," read *Icteric.*
" " 459, 16th " from top, for "partially," read *partially.*
" " 459, 9th " from bottom, for "are," read *or.*
" " 467, 18th " from top, for "suppressed," read *suffused.*
" " 467 5th " from bottom, for "water" read *valer.*

In Dr. Holt's article, on page 481, 10th line from top, for "argument," read *agreement.*

SOUTHERN

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ORIGINAL AND ECLECTIC.

ARTICLE XXX.

A glance at the "Reply" of Silas Ames, M. D., to "Experiments with Phosphorus," &c. By Wm. M. Boling, M.D. (Abridged by the author, from the New Orleans Medical and Surgical Journal, for March and May, 1855.)

[Concluded from September No. p. 544.]

In considering the cause of certain discrepancies between the results from the use of the tinctures of phosphorus in his hands, and in my own, Dr. Ames makes the following quotation from my paper: "In connection with this experimental practice upon myself, I will again call attention to the views of Dr. Ames, in regard to the effects of the tinctures of phosphorus, and their dose. Thus, he says, speaking of the saturated tincture, that it 'cannot be continued in the smallest quantity mentioned—half a drop—for any great length of time, without inducing considerable disturbance of the stomach, shown by nausea or vomiting, burning heat, and a feeling of oppression at the epigastrium.' Though he admits that, in the quantity of two drops, 'a *single* dose, or *perhaps a few* doses, may be given with impunity,' he would evidently regard any lengthened use of it in such a dose as a very grave and serious matter, and tells us of one instance in which dangerous effects resulted from the administration of three doses, of two drops each, at intervals of twenty-four hours. While Dr. Ames tells us that doses of half a drop cannot be continued for any great length of time, without the most serious results, I have myself taken it in doses of five drops—being just ten times the quantity—a long

time; and for eight days, without omission of a single dose, without effect. While under his observation, from a cumulative action, dangerous effects resulted from three doses of two drops each, administered at intervals of twenty-four hours, being in all six drops taken in the course of three days. I have taken, for eight successive days, three doses of five drops each, or fifteen drops per day, without effect. Indeed, unless I should discover something in its action, which has never as yet been manifested in any of my experiments, from all the lights at present before me, I should not hesitate, were it not for the mere trouble of the thing, to continue it in the same manner for years."

"In the healthy subject, at least, any effect of the article resulting in nausea and vomiting, could be easily appreciated; yet, not only did my subjects take it in doses, as mentioned, so immeasurably greater than the doses with which Dr. Ames says such effects are produced by it, but they took it under circumstances that were well calculated to favor the production of such an operation. Thus, while they sometimes took it in the middle of the interval between the meals, they also took it at times immediately before eating, and at others immediately after eating. On several occasions, I, myself, having forgotten my dose, which I usually took just before eating, until I had partly finished my meal, have called for my vial, taken the dose, and proceeded with my meal, without disrelish or any manifest effect."

In pointing out the cause of the discrepancies, says Dr. Ames, "the first step in the process is to point out some errors in these extracts which, in themselves, go a good way towards effecting this desideratum." He continues: "The first error that I shall mention is, that what I said of two drop doses is applied, inadvertently, of course, to the half drop doses. The latter are spoken of by me, only as liable to produce considerable disturbance of the stomach, when long continued, while the former are said in effect to be unsafe in the treatment of pneumonia, if continued for any great length of time. The 'most serious consequences,' therefore, should properly refer to the effects of the larger doses only."

That a proper estimate may be formed of the extent to which I have misrepresented the language, or misconstrued the meaning of Dr. Ames, it will be proper to present again the passage referred to. Speaking of doses of from half a drop to two drops of the saturated tincture, he says: "It cannot be continued in the *smallest* quantity just mentioned for any great length of time, without in-

ducing considerable disturbance of the stomach, shown by *nausea or vomiting, burning heat and a feeling of oppression at the epigastrium.*"

Let the reader judge; are the words, "the most serious results," language too strong for such symptoms as the above, (produced, it will be seen, Dr. Ames says, by the *half drop* doses,) and more especially when resulting from an article of which he had such fearful apprehensions? If the above are not serious symptoms or results, when following the supposed administration of so incendiary a poison as phosphorus, what results should we look upon as serious? Nothing, perhaps, short of the death of the patient. Dr. Ames proceeds:

"Another error arises from a wrong construction of the following passage: 'Its effects are cumulative; that is to say, a dose which, singly, is not large enough to produce any sensible effect, may become very troublesome, or dangerous, after several repetitions at intervals of *three or four hours.* This *quality* was developed, in one instance, by repeating it in a dose of two drops of the strong alcoholic solution three times at intervals of 24 hours.' Dr. Boling construes this to mean that dangerous effects resulted from the three doses given at intervals of 24 hours; but the reader will see that the troublesome or dangerous effects referred only to the dose repeated every three or four hours, and that the cumulative quality alone is referred to, in speaking of its repetition once a day."

Now this is, really, it seems to me, "about as broad as it is long." The cumulative "*quality* was developed in one instance," &c., and how must it, of necessity, have shown itself, according to the definition of the *quality* given by Dr. Ames? Here it is: "Its effects are cumulative; *that is to say*, a dose which, singly, is not large enough to produce any sensible effect, may become *very troublesome or dangerous* after several repetitions at intervals of three or four hours," and which quality—so *characterized*, of course—was even in one instance developed by repeating it in a dose of two drops, three times, at intervals of 24 hours. It was surely not a material error, if, in my grammatical construction of the sentence, I took the evidences of the quality—the effects indicating, according to Dr. Ames, its operation or presence—for the quality itself. The Doctor proceeds:

"A third error, the source of which is in part explained in the two preceding paragraphs, is, in the comparative estimate of the quantity of phosphorus taken by Dr. Boling and that given to my

patients, to which the danger of serious consequences was ascribed, if continued any great length of time. Dr. Boling took five drops of a tincture, containing less than one grain to the ounce, three times a day. Supposing it to be a full grain, each dose was about the one-hundred-and-sixtieth part of a grain. My patients took two drops of a tincture which, as we have seen, there are the best reasons to believe, contained at least six grains to the ounce."

Proceeding on *such* data, Dr. Ames shows that his patients took much larger doses than I did, in the experiments upon myself. Now, I took *five* drops, *three* times a day, it will be remembered, for eight days in succession, without any effect whatever; while, in the case alluded to by Dr. Ames, the *cumulative quality* was developed by giving three doses of two drops each, at intervals of 24 hours; that is, in all, six drops, in 72 hours or three days. *The tinctures used by Dr. Ames and myself were the same.*

"The doses taken by Dr. Boling, therefore," (remarks Dr. Ames,) "instead of being ten times greater, were less than half the size, or more than 20 times less than the estimate."

Five drops of the *same* tincture at a single dose, I surely cannot be mistaken in supposing must be just ten times as much as half a drop at a single dose; and five drops, three times a day, in like manner, for the 24 hours, just five times as much as half a drop six times a day.

Speaking further, of my experiments, Dr. Ames says, "The largest quantity given to either of his subjects in one day was 272 drops of a tincture having *less than a grain* to the ounce, or about the third of a grain of phosphorus. The daily aggregate of the half drop doses" (of a tincture, let it be remembered, *estimated by Dr. Ames* to contain six grains to the ounce, though we *both used the same tincture*) "given to my patients, if repeated every four hours, is about the 45th part of a grain; so that the difference, instead of being so 'immeasurably' great as supposed by Dr. Boling, is only as one-third of a grain is to the 45th of a grain; and the measure of the difference is almost exactly as fifteen is to one."

"Some explanations, or rather plain matter of fact statements, which, however, are unnecessary to any who may have read my former paper, as to the strength of the tinctures used both by Dr. Ames and myself, may be deferred for the present, while we proceed upon the supposition that they were alike, as in reality they were. The daily aggregate of Dr. Ames' half drop doses, would be three drops. My subject took, in one instance, 200 drops of

the saturated tincture at a single dose, and on another occasion 272 drops, in the course of about *eight hours*—the latter being just ninety times as much as the aggregate of Dr. Ames' half drop doses in the *twenty-four hours;* and without appreciable effect. But this half drop dose of the saturated tincture under consideration, is not, be it remembered, the medicinal dose given by Dr. Ames; but the latter is half a drop of the diluted tincture, which is only *one-tenth* as strong. When my subject, then, took 200 drops of the saturated tincture at a single dose, and without appreciable effect, he took just four thousand of Dr. Ames' medicinal doses, which, he says, occasionally produce "some *very sensible effects* upon the head and stomach." And let it be again called to mind, also, that in his Reply, Dr. Ames speaks of the "*peculiar activity of its physiological* manifestations in a much more minute quantity" still. It is to be regretted, I think, that the Doctor was not a little more explicit in this instance; say both in the character of the physiological manifestations, and as to *how much more minute* the quantity.

Phosphorus, according to what Dr. Ames says of it, is certainly a *very* "eccentric" article. *One* of the most—though some might doubt, perhaps, as to whether it is *the* most—eccentric of all the eccentricities ascribed to it by him, is that in virtue of which, the *same* tincture, prepared by the *same* apothecary, from the *same* materials, and taken out of the *same* bottle, there can be no reason to doubt, should, when used in his prescriptions, contain *six* grains of phosphorus to the ounce, and when used in my experiments, contain *less than one* grain to the ounce. There is, in fact, a good deal of figuring done by Dr. Ames, in which his doses are made to appear to bear a much nearer proportion to those given by myself, than in reality they do—all based upon this cool and quiet assumption of a difference in the strength of the tinctures. He does not explain how this curious thing is brought about; but it can scarcely be questioned that, by the *same process*, he might have made the disparity still greater. In my former paper, I made the following *pointed* statement, in regard to the tincture I used.

"The preparation that I at *first* used in my experiments, I obtained from the apothecary from whom I am in the habit of procuring medicines for my own use, and who prepared it at my request; but though I had no reason to suppose that it was not of good quality, I subsequently supplied myself with both the diluted and saturated tinctures from the *apothecary who prepared the tinctures used by Dr. Ames.*

I may here say, what I did not think worth while to mention at the time—and it may seem unnecessary now—that all my *published experiments were performed with the tinctures obtained from the latter source.* The identity of the tinctures used in my published experiments, with those used by Dr. Ames, would be taken for granted, it is but reasonable to suppose, from the care I took to point out the source from whence I obtained them; while the motive for doing so, of course, could not be misunderstood. I must confess myself puzzled, therefore, to know, by what strange and mysterious process, the difference on which Dr. Ames' calculations are based, is brought about. Had the Doctor merely said that the tincture, when used by himself, was six times as *powerful* as when used in my experiments, instead of claiming that it contained six times as much of the active principle, in the absence of a better, something of an explanation might be found in the supposition, that he carried it, before using it himself, through a process of "dynamization"—by giving it, say, perhaps, a certain number of shakes—but his phraseology does not authorize the confident adoption of this method even, of explaining the mystery.

Dr. Ames, in his Reply, it may be remembered, attaches considerable importance to the fact, that my experiments were made exclusively upon the healthy subject. Between the date of the publication of my former paper, and the appearance of the reply, I administered the tincture of phosphorus in two cases of pneumonia, and in several other cases of febrile disease. Although the length to which the present paper has already reached, and the extent to which it must still further be prolonged, will prevent me from giving the details of these cases, it may suffice to say, that with all the watchfulness I was capable of exerting, I was unable to discover the least effect of any kind whatever, from its use. The dose administered in the several cases, varied from one to three drops of the saturated tincture every hour.

It may be asked, why administer an article from which no benefit was expected? My answer is, that, though I expected no benefit from it, I did not allow its use to interfere at all with the administration of such other remedies as I deemed advisable in the cases; and that I could not possibly be brought to feel more confident (this confidence based upon many experiments upon the well, cautiously, and at first step by step made) of any medical fact, than that in the doses mentioned, it would do no harm. With this explanation, my real motive for giving it is sufficiently obvious.

Referring to the circumstances under which my experiments were performed—upon the healthy subject—the statement is made by Dr. Ames, that I, myself, took the phosphorus *at my meals*. He, further, alludes to the probable difference in the action of a poison taken upon a full or an empty stomach, and then goes on: "Dr. Boling, it is true, did not take his dose literally on a full stomach; but taking a dose *just* before eating, is practically, or so far as concerns the irritant action of a poison, whose action is *slow* in developing itself, the same thing as taking it during or immediately *after* a meal." He also mentions the fact, that it was soon after a meal, that the largest dose taken by either of my subjects, was administered. I find, however, on referring to my experiments, that, in one instance, a dose of a hundred drops of the saturated tincture was given at five and a half p. m., which must have been as near giving it upon an empty stomach, so as to insure a considerable interval, prior to the next meal, as could well be, without the omission of a meal.

In making the experiments upon myself, my reason for taking the phosphorus before the meals was, that I might not be so likely to forget it; and though it is stated that I took it just before eating, it was not intended to convey the idea that, designedly, I took it just at the very instant before the commencement of the meal. The time at which I took it, in relation to my meals, may have varied from one minute to thirty miuutes; and in a few instances I took the dose during the meal, having forgotten to take it before. Now, it will be seen that, instead of taking it upon a full, I generally took it upon a very empty stomach, and therefore under the most favorable circumstances for the development of the poisonous action of an article, so far as refers to the stomach itself, not *very slow* in its operation. It is in a very quiet and matter-of-course kind of way assumed by Dr. Ames, that phosphorus *is slow* in its poisonous action; but is it probable that such is the fact? On the contrary, it would seem that it is very speedy. Writers are unanimous (I believe, at least) in the opinion, that it is *very prompt* in its stimulant operation. Dr. Ames, it will be remembered, says that this *stimulant* action is dependent on, and therefore, of course, *secondary* to, its poisonous action. Thus: "Its poisonous effect is * * * * * * highly stimulant, by reason of the local inflammation it excites." In regard to its stimulant action, Lobestein says: "Its action is *very prompt*, *intense*, &c." Merat and Delens (Dic. de Matière Médicale) say, that "le phosphore est un des

stimulans les plus diffusibles et les plus actifs; comme tel, l'action en est à la fois *prompte, vive*, &c." Galtier says: "Le phosphore est un excitant très actif, dont les effets sont *prompts, instantanés*, &c." Dr. Ames, himself, further says—speaking of the impossibility of effecting a very powerful sedation with it, and in explanation of the reason—"when the dose is enlarged for this purpose, beyond a certain point, a new and opposite action is *immediately* set up;" alluding in this to its poisonous action. Instead, then, of being *slow* in its action, as *stated* by Dr. Ames, it would seem, upon his *own testimony* even, to be *very* prompt; and, as a matter of course, any arguments based upon, or inferences deduced from the assumption that it is slow, are necessarily fallacious, and may be passed without further notice.

As an argument in favor of the utility of the tincture of phosphorus as used by him, Dr. Ames again, in his Reply, reminds us of the success of his "treatment of pneumonia by this as one of the chief remedies; in which the mortality is found in sixty-eight cases occurring in the course of a little over four years, reduced to less than three per centum."

Dr. Ramsey, of Georgia, without phosphorus, and relying in a great measure on two of Dr. Ames' *discarded* remedies—calomel and tartar-emetic—claims to have lost but one out of 170 cases of pneumonia; a trifle more than the half of one per cent.

The profession are beginning to regard with an eye, rather of distrust, the subject of statistics, notwithstanding their several advantages. At a first glance, it would appear that the results must of necessity be accurate; but such is by no means the case, and there are several attendant sources of fallacy—some of them perhaps unavoidable. One, for instance, might grow out of a difference of diagnosis, pronounced by different physicians—may-be from greater accuracy in one than another; perhaps from caprice, or particular views entertained; and in consequence of which it is not impossible that where the actual mortality might be equal as regards some particular disease, the apparent mortality might be greater in the records of one than another; and possibly even greatest, where it was in reality least. For example, let us suppose the prevalence of some epidemic—say pneumonia—with a tendency to the development with it of some severe complications of a prominent character—say, pericarditis, meningitis, enteritis, or something else. Now, under such circumstances, we may well conceive that a different diagnosis might be given in the same, or

similar cases, by different physicians. One, for instance, might regard the pneumonia as the primanry disease, and the pericarditis, say, as secondary, and a mere complication; while the other, attaching more importance to what the former regarded as a complication merely, and secondary, might set this down as the primary affection. Under such circumstances, though the mortality might be equal, the case-book of the one would show a greater number of fatal cases of pneumonia than that of the other, in consequence of the exclusion from the list by the one, of cases having a fatal tendency, such as were placed upon it by the other.

On the other hand, it is not impossible, that in reference to cases of a milder and less dangerous character, the diagnosis might be such as to make the disparity appear still greater. Thus, for instance, while he who had placed upon his pneumonia list, such severe and dangerous complicated cases as are above referred to, might exclude from the same a class of milder cases, such as had but little tendency to fatality, and set them down as bronchitis or catarrh, the other, who had excluded from his pneumonia list the complicated cases having a fatal tendency, might place these milder ones upon it. Thus, while in the one case, the apparent fatality, as regards the disease in question, would be augmented in the practice of one, by including among the number, cases having a fatal tendency, and excluding others of a milder character, having no such tendency, by a reversal of this double process in the other, it might be diminished by excluding from the list the cases in question—placing them under some other head—and including the milder ones, which were placed under another head by the former. Such instances of difference in diagnosis are not rare. A gentleman was taken sick, under somewhat peculiar circumstances; his disease, by the physician who was first called to see him, was pronounced a severe pneumonia. On the fifth day of his sickness, when he was worse than he had at any time previously been, I was called to see him. After a most careful examination, the case did not appear to me to be one of pneumonia. A professional friend gave me the particulars of a somewhat similar case. Now, here are instances in which a *milder* form of disease would appear on the case-book of one physician as pneumonia, and on that of another physician under a different caption; augmenting, in one instance, the apparent success, as regards this particular disease, and diminishing it in the other. I will mention an instance of an opposite character. A professional friend informed me that he and

another medical gentleman had each a patient in the same establishment, both affected with the same disease, and pronounced by him—pneumonia. The other physician, however, did not call it pneumonia. Both patients died. On the case-book of one of the physicians, his case appeared on the pneumonia list, and among the fatal ones. On the case-book of the other, his would be placed under some other head—"catarrhal fever," I believe, was the name given it—and, of course, his pneumonia list, as regards success, would gain by its loss.

It will be seen, from references already made to the articles of Dr. Ames, that he entertains very grave apprehensions, that serious mischiefs might arise from the use of his tinctures of phosphorus, even in the small doses in which he speaks of them, and his remarks are suggestive of great, very great caution in their administration. Speaking of the doses which he says were recommended by certain authors, he remarks:

"In these doses, small as they may seem, it is spoken of in many instances as a dangerous and uncontrolable remedy, and cautions against mischief from it, are everywhere numerous, urgent and impressive. Dr. Chapman"—he goes on—"referring to doses of the one-sixteenth of a grain, says: 'Whatever may have been the degree of its utility, this appears to be *fully* balanced by the hazardous nature of the medicine, and the positive mischief which is acknowledged to result from it.'"

I quote from the article "Phosphorus," in the 2d vol., 2d edition of the Therapeutics of Dr. Chapman. Before he speaks *at all* of the dose, he says: "But whatever may have been the degree of its utility, it appears nearly balanced by the hazardous nature of the medicine, and the positive mischief which is acknowledged to have resulted from it. Even in its moderate operation, phosphorus is described as stimulating the whole system, &c." As to the dose, he refers to a prescription of Hufeland, a seven ounce mixture, regarding which, the directions are "Omni bihor. cochlear sumendum aut plus pro re nata." What he says, and all he says of the dose, that I can find, is this: "But whatever mode is selected, the *fourth* of a grain is the largest dose, and the whole amount should not exceed two grains in the 24 hours."

Now, how long, according to the dose and method of administration pursued by Dr. Ames, would it require for a patient to take the quantity allowed by Dr. Chapman for the 24 hours? There would be in the two grains, thirty-two thousand of Dr.

Ames' doses. Supposing the dose to be repeated every fourth hour—the interval preferred by Dr. Ames—without omission, and it would take five thousand three hundred and thirty-three and one-third days, or fourteen years seven months and thirteen and one-third days, for its consumption. This, too, supposing the article were continuously given; but owing to the cumulative quality ascribed to it by Dr. Ames, *he* could not thus, of course, consistently venture to continue it, but would deem it necessary to omit it much of the time, so that a longer period—say a matter of twenty or twenty-five years—would probably be required for its administration; and Dr. Chapman himself, in admitting the quantity mentioned, urging the necessity of caution in the use of the remedy.

Again, in urging the dangers of the remedy—speaking at the moment, however, of its eccentricity—Dr. Ames remarks:

"While it is said, on good authority, to have been given at times in doses of several grains without doing serious mischief, at other *times*, less than one-tenth of a grain (six milligrammes) has been known to prove fatal." To this remark, the following paragraph is appended as a note, referring, it will be seen, to Cazenave, as authority for the assertion.

"Cazenave.—But this author thinks that in all cases in which such large doses have been given without harm, the article had undergone some change in its chemical state, which rendered it inert. Si l'on a pu dire qu'il a été administré avec inocuité à la dose de 3, 4, 5, 6, décigrammes, on doit croire que dans ces cas il y avait de composition, et changement dans son état chimique." Here is the sentence referred to, and in part quoted by Dr. Ames.

"En effet, à la dose de 6 milligrammes, on l'a vu *determiner des accidens;* et si l'on peut dire, &c.," as above.

Now, it strikes me, that there is nothing in the above sentence to warrant the assertion of Dr. Ames, that Cazenave says, that in the dose of six milligrammes (less than the tenth of a grain) it has been known at times to prove fatal. Where the word "accident" is used in the French language, as implying death or fatality, as far as I have observed, and I think that such is invariably the case, it has associated with it the adjective, "funeste," or "fatal;" as, for instance, "un accident fatal"—"un accident funeste"—or "des accidens funestes," &c. Where it is used without such qualification, it will generally, I think, be found merely to imply, grave, serious, alarming, or unlooked-for symptoms. I will quote a few examples for illustration.

"Il est probable qu'en donnant des boissous huileuses dans le cas où le phosphore pris à l'intérieur causait *des accidents*, on arrivait à les calmer." (Merat et Delens. Supplement to Dic. de Mat. Médicale, p. 555.)

The same authors, (vol. 5, p. 274, of the same work,) speaking of some of the peculiarities of phosphorus, say that they, "exposent les expérimentateurs à *des accidens*, qui du reste n'ont rien de spécifique, et réclament les mêmes soins que les brûlures graves ordinaries." In the same volume, page 282, "La conduite à tenir dans cette denière occurrence, cest-adire, en cas *des accidens*, consisterait, on le sent bien, à évacuer, au moyen d'un vomitif," &c.

"Après l'ingestion de cette dose considérable, les *accidens* alloient en augmentant avec une progression effrayante; la malade devient entièrement sourde et aveugle; la respiration s'embarrasse; son pouls était misérable; sa peau se refroidit." (Dic. de Méd., vol. 26, page 569.)

"Ces préparations peuvent à elles seules, conjurer *des accidens* de la mobilité nerveuse, et quelques formes vaporeueses de l'ordre le plus élémentaire." (Traité de Thérapeutique par Trousseau et Pidoux, Tome 2me., page 252.)

Now some of these passages, at least, appear to be of a precisely parallel construction with that of Cazenave, referred to by Dr. Ames; and if in the latter instance, "des accidens" means death, surely it cannot mean less or more, when found elsewhere, used in a similar manner. How absurd, then, in these French doctors to tell us—in one instance, to administer oleaginous drinks to a corpse; in another, to evacuate the stomach of a dead body, by means of an emetic; in another, to treat "des accidens" as an ordinary burn; or, again, to tell us that a patient become deaf and blind, had embarrassed respiration, a bad pulse, &c., when she must of necessity have been already dead.

The smallest fatal dose mentioned by Periera, who has written so elaborately on every article of the Materia Medica, and whose examination of authors seems to have been so searching, and citations so numerous, is one grain and a half. In a careful examination of the authors in my library, I find a reference to one solitary case, mentioned by Lœbelstein—Lœbel, in which it was supposed that the eighth of a grain proved fatal; and another, mentioned by M. Martin Solon, in which the fourth of a grain is said to have produced a similar result. Periera, however—as in his work, according to Dr. Ames, "one might expect to find them, *if*

any where"—it is but reasonable to suppose, regarded them as apocryphal, as he does not quote them.

Dr. Ames, in the conclusion of his paper, says some right good things, about my not exploring his field, but preferring "rather to look from afar off, and through an à priori telescope." It is not always the case, that he who may be nearest to an object shall have the most perfect view of it. On the contrary, there are circumstances under which, another, at a greater distance, might possibly see it to better advantage. Such, it may be conceived possible, at least, might be the case in the present instance; and that another, not having his visual organs dazzled by the prepossessions with which Dr. Ames may have been affected, even at a greater distance, might possibly have a more distinct view of the object than himself. Such an opinion, is not a mere assumption of the writer, but is exemplified by actual observation in every-day life. Sir Gilbert Blane, on this point, remarks: "It is requisite for the forming of a clear, calm, and impartial judgment, that objects should be placed at a certain distance, in order that they may be seen in their relative positions and bearings, which the eye or mind of a close observer, or of a party concerned, is incapable of taking in." Moreover, the lights thrown upon a subject by an observer, might possibly, it can be understood, aid another to a better view of it, than he himself may have had, as the vision of the bearer of the torch, is often less assisted by the light he carries, than that of others who may be near. In the present instance, for example, the paper of Dr. Ames, from the fact of my having been led by it to cypher out the size of his dose, which he himself had not done, may possibly have had some agency, indirectly, in shedding light to me upon the subject, which, from the absence on his part of any precise investigations in this particular, might possibly have been lacking to him; and of which, moreover, if he had had the benefit, many will believe that the perception of the object in his mind's eye, would have been greatly modified.

It cannot be doubted, however, that the impression received, or opinion formed of an object, may be influenced or modified, by the point from, or the media through, which it may be regarded, and the remarks of Dr. Ames, referred to, are suggestive of the propriety, in all cases, in estimating the degree of importance to be attached to the views entertained or given on a subject, to bear this fact in mind. Let us therefore, if possible, or as near as possible, examine the point from, and the medium through which the

curative influence of phosphorus in pneumonia was seen and examined by Dr. Ames; in doing which, it may be necessary to travel somewhat from the written record.

In his article, on Pneumonia, Dr. Ames remarks of phosphorus, that it had already been employed in several of the phlegmasiæ, "and among the rest, in pneumonia, but under precisely what circumstances, and with what success," says he, "I have not been able to learn."

But very little, indeed, has been said by the regular medical profession, of the use of this article in pneumonia, so far as I have been able to learn. It *has* been used, however, very extensively in this affection; and with some, therefore, the remark of Dr. Ames, that, "precisely under what circumstances, and with what degree of success, he had not been able to learn," will be read with surprise; seeing that these are very distinctly stated by those who claim to have long used it, and with great success—as great, even, as that claimed by Dr. Ames. It would seem but probable, that Dr. Ames, like most other gentlemen of the profession, of extensive reading and investigating habits, had made himself, to some extent, familiar with the medical literature of the homœopathist, and he could scarcely glance at a work, at least a practical work, by any of the followers of Hahnemann, without finding presented before him, urgent pretensions of the utility of *phosphorus in pneumonia*, with the *circumstances* under which, in their opinion, it should be administered, given, as also statements of the degree of *success* attending its use. Among the symptoms, said by them to be caused by it in the healthy, are, "accelerated circulation of the blood," "increased frequency of the pulse," &c.; and the instances are numerous in which it is directed by them in disease, where there is a quick pulse. Aside, then, from any views entertained by the homœopathists, of its modus operandi, *should* others be influenced in their inference as to its action, from the circumstances under which it is regarded as indicated by them, it seems probable that, so far, they would be led to the belief of its sedative operation; for according to their views, interpreted in the language of legitimate medicine and the regular physician, *they* must regard it as a sedative, quoad an accelerated state of the circulation, as a morbid condition. By Dr. Flieschmann, of Vienna, a homœopathist, it would seem that it is employed almost exclusively in every stage of pneumonia; and there are perhaps few articles more used by the homœopathists, or more confidently recommended by them

in any disease, than phosphorus in this affection. Such being the case, it will be a matter of regret, of course, to Dr. Ames, from his own sense of justice, that he was not aware of their claims. It is not at all probable that these gentlemen will regard with indifference, and without reclamation, even an unintentional appropriation of some of their very loudest "thunder;" and while others may think that it would be but right that even "the devil should have his due," however small, they, themselves, will not, it is probable, be backward in claiming that Dr. Ames' "new medical fact," was, to them, an *old* medical fact.

It may not be deemed irrelevant, on the present occasion, while thus touching, as it were, on the homœopathists and their pretensions and claims, to refer to a work on Pneumonia, by J. P. Tessier. From this, it appears that the author, actuated by motives seemingly identical with those by which Dr. Ames was influenced, by a somewhat analagous process, the details of which were, as in his case, step by step, adopted, arrived at very similar conclusions and results. The circumstances may, with the more propriety be alluded to, as affording another instance, gratifying, of course, to Dr. Ames, of the corroboration of his adopted views, by an observer at a distant point, and more especially in view of the similarity in the motives, the means and the results.

Dr. Ames and M. Tessier, both dissatisfied with the results of the treatment of pneumonia, according to the more generally received and approved methods, were, as all should be, anxious to improve upon them.

The remedies with which Dr. Ames had become dissatisfied, were, blood-letting, tartar-emetic and mercury. Those with which M. Tessier had become dissatisfied, were, blood-letting and tartar-emetic; mercury not having been a remedy much, if at all used by him, prior to his experiments in search of a better treatment. By Dr. Ames:

"The method employed was that of occasionally leaving out of the treatment one or the other remedy." ——— "The first step in the experimental inquiry encouraging me to proceed, blood-letting and mercury came to be used only in certain circumstances." ——— "Tartar-emetic, by far the most valuable remedy of the three, was continued longer." ——— "The treatment of pneumonia, then, which was finally settled down on, somewhat more than four years ago, consists in discarding the three principal remedies in common use, and substituting others in their stead," &c. The remedies

discarded were antimony, blood-letting and mercury; and the remedies *submitted*, were *aconite* and *phosphorus*, while quinine, blisters and opium, which, of course, were of the old remedies, were retained.

With M. Tessier, after *he* had *discarded* blood-letting and tartar-emetic—his former remedies—*aconite, phosphorus* and bryony, were the articles *substituted*. *He* says:

"Après l'étude préalable des écrits de Hahnemann et de ses disciples, j'ai lu quelques uns des recueils où sont consignées les observations particulières de malades traités d'après la nouvelle méthode."——"Je me hasardai chez un malade amené à la rémission par les saignées, à *substituer* le *phosphore*, au tartre stibié que j'administrais en pareil cas."——"Je résolus alors de diminuer peu à peu le nombre des émissions sanguines au début du traitement, et de ne point attendre la rémission pour recourir à la méthode Hahnemannienne * * * * * Je diminuai donc une, deux, trois, quatre émissions sanguines chez les malades qui se suivirent, rapprochant toujours du début l'administration des nouveaux remèdes. Je commençais par une dose d'aconit suivie d'une dose de begone au bout de douze au de vingt-quatre heures, et faisant suivre la bryone du phosphore. Moins je saignais et plus les malades étaient soulagés après l'administration des doses infinitésimales."

At length the lancet is, as by Dr. Ames, entirely discarded.

"Je me décidai enfin à ne plus saigner et à recourir d'emblée à la medication Hahnemannienne."

Dr. Ames, alluding to aconite, says: "The best effects of this remedy in pneumonia are exerted in the first stage." M. Tessier also, after *his* adoption of the "nouvelle methode," seems to have regarded the use of this remedy, as chiefly beneficial in the early stage; generally, indeed, to have commenced the treatment with it.

In regard to phosphorus, Dr. Ames tells us: "If the medicinal qualities of aconite adapt it more especially to the first stage of pneumonia, so it may be said, those of phosphorus recommend it more particularly in the second and third stages. M. Tessier's *experience* led him to a similar conclusion. He used the phosphorus only after the aconite, and found it, in pneumonia, "utile dans les inflammations locales, menaçant de passer à la suppuration."

Of the cases collected in *four* years by Dr. Ames, *two* only proved fatal. With M. Tessier, "depuis plus de *deux* ans, *un* seul,

à succombé." *Other cases proved fatal, but some how or other, he does not count them.*

Between Dr. Ames and M. Tessier there is also a seeming sympathetic correspondence of thought or sentiment, on other points. Speaking of his views in regard to the action of phosphorus, Dr. Ames says:

"And here in alluding to the discrepancy, I wish to say, that I am fully sensible of the *responsibility* of uttering as a new medical fact, that which is opposed to standard authorities in medicine, and to the established opinions of the great mass of the profession."

M. Tessier, speaking of his newly adopted views, says:

"Ce n'est point, en effet, une légère *responsabilité* que celle que pèse sur un médecin alors qu'il va substituer dans le traitement d'une maladie grave une methode nouvelle à celle qui a pour sanction l'expérience universelle."

There is, however, a difference, more seeming than real, perhaps, between the doses of phosphorus recommended by M. Tessier, and by Dr. Ames; the former giving somewhere from the decillionth to the millionth of a grain at a dose, I believe, and the latter, as has been shown, as much as the one-sixteen-thousandth of a grain at a dose; admitting for the moment, that all the phosphorus contained in the half-drop dose of the tincture given by Dr. Ames, is really received by the patient, and that it is not, (though in all probability it is,) in a great measure or entirely lost in vapor, or chemically changed, when the solution is mingled with the water, preparatory to its administration.

There is also another difference, to which importance may be attached by some, though it may be regarded as of no importance by others, between Dr. Ames and M. Tessier. While the latter makes frequent and open mention of Hahnemann, and his writings and doctrines, and speaks often of the "nouvelle methode" and "les doses infinitésimales," the former—"never says turkey once."

An incident, apparently connected with the early history of the use of phosphorus in the practice of certain physicians of our place, who are not out-and-out homœopathists, (for by the latter it has been a favorite remedy, as long as any have been among us) is thus given by a gentleman who claims to know all about the matter.

Two or three physicians attended in conjunction several cases of pneumonia, on a plantation about three miles from town. The result in several instances being unfavorable, the proprietor stated

that should another case occur, he would send for a homœopathist; and another case occurring in a short time, he did so. The patient recovered. The gentleman inquired of the homœopathist what were the remedies he used in such cases, and was answered, aconite, phosphorus and bryony. This information was communicated to the physicians previously in attendance, and about this time, phosphorus is heard of as a remedy for pneumonia, in other hands than those of the pure homœopathists.

Many cases of pneumonia, it is but reasonable to suppose, would recover under a purely expectant treatment; and there are but few in the profession, who would not be disposed to regard the instance above referred to, as of this kind. But, under all the circumstances, it is not unreasonable to suppose that Dr. Ames, in the adoption of the phosphorus practice, may possibly have been influenced to some extent by the incident just related. Viewing, then, the question with the prepossessions thus it may be determined—regarding it as it were, "through an à priori telescope"—it might be considered "no impeachment of the natural accuracy of his vision," to admit the possibility that he may have been wrong, and that he may have ascribed effects to his phosphorus, that were fairly attributable to other causes. The homœopathic construction of the instrument, may fairly account for the "infinitesimal" character of his doses; while in view of certain effects said by him to result from them, as a visual assistant, its powers would seem to be such as to develope the degree of perfection implied in the couplet:

> "He hath keen optics, well I ween,
> Who sees what is not to be seen."

ARTICLE XXXI.

Observations on the Yellow Fever Epidemic of 1854, *in Augusta, Ga.*

By W. L. FELDER, M. D.

Interminable disputations have always existed, and will continue to exist, upon the subject of Yellow fever epidemics; nor have such disputations contributed to establish upon the minds of many a permanent and fixed opinion as to its cause and origin. Many, however, are agreed upon the subject of its miasmatic origin, and among *the number*, I would record my opinion, as to this mode of dissemination, and manner of attack; nevertheless, I would be liberal, and extend to others any opinions they may have formed

upon this subject, in as much as a refutation of opinions, differing with ours, would not answer my purpose in the present article, intended briefly to refer to the epidemic of the past year, in Augusta, and especially as it occurred in my practice. The epidemic made its appearance here several days before I had an opportunity of seeing a case, such as I believed to be genuine and unmistakable in its character; although I had several very aggravated cases of remitting fever, two of which, especially, were brought from Savannah during its prevalence and first appearance there, and while much excitement existed upon the subject of its being in our city.

I was not satisfied then, nor am I now, of the genuineness of these cases, in as much as the paroxysms differed in no wise, or very little, from those of aggravated bilious fevers in common practice. The exacerbations and remissions occurred once in every twenty-four hours, nor were they marked with intensity of violence, sufficiently, to impress me with the belief that they were *yellow fever* cases. Had the individuals, however, remained in Savannah, in contact with, and breathing that atmosphere, the cases might have assumed a yellow fever type; but being removed, or occurring after they had reached our city, they were differently masked. A few days only intervened before I had an opportunity of attending a case, and here began my experience, or acquaintance, with the epidemic; nor was it long before I had many opportunities of treating the fever, both in its aggravated and simple or mild forms. The beginning, or initial symptoms of my first case differed from any other that came under my care, and materially so, in the obstinate torpor and coldness of the surface.

Three days were spent in untiring exertions to rouse the cutaneous surface, with but little effect, notwithstanding frictions were often used with *hot brandy, mustard, cayenne, and turpentine*, with the use of mustard sinapisms, frequently and perseveringly applied literally over nearly all the surface.

Vesicatories, applied to the superior and inferior extremities and epigastrium, produced vehement febrile reaction, with vomiting; nor did the vomiting cease for several days, notwithstanding the blister upon the epigastrium drew finely, and the irritation was kept up during the period of innovation and whole attack. Augusta was never visited before, but once, by yellow fever, and, from what I have understood, the cause of its visitation was attributable to the *immense* quantities of litter and refuse of the city

thrown into the Savannah river, during its ordinary height, and which became exposed suddenly from continued drought, causing the river, in part, to dry up, thereby exposing to the daily influence of a hot sun, a mass of putrifying material, such as would produce fever of any degree of malignancy. The epidemic of the past year had not the same point of incubation, or origin, nor was this necessary for its production, as the internal condition of the city furnished fertile sources sufficient in itself for its production and spread. The city of *Augusta* is situated in a malarial latitude, or region, and presents many of the characteristics of an unhealthy location: indeed, where the city now stands was once a dense swamp, filled with that peculiar sort of growth common to low and mucky places.

The land is fertile, and favors the growth of vegetation, which would spring up in great abundance upon the lots, (public and private,) but for the vigilance and untiring exertions of the proper authorities, whose zeal and energy is unparalleled, and entitle them to our warmest gratitude and highest considerations for their care and watchfulness over the health of the city. The houses, in many parts of the town site, are crowded together, in such manner as to afford but little facilities of free ventilation, and of properly cleansing, consequently these places were more severely scourged in the early part of the epidemic than any others. The first case of fever that occurred, however, was in a sparse and thinly settled part of the town, very high up, and far removed from that part mostly affected, and occurred in the person of a colored servant, who died of *black vomit*, with but few days' illness. The fever regarded no right of the acclimated inhabitant to an exemption, but fell equally heavy and ruthless upon the native born as it did upon the stranger—nor *did it respect age or sex.*

The season of the past year's invasion was closely identified with that of the first occurrence of fever here, although the point of attack materially differed. The fever of thirty-nine first occurred along the margin of the Savannah, and in Bridge-row, while that of the past year made its appearance high up, and in the opposite side of the city. During the prevalence of the fever, the weather was hot and uncommonly dry, and with but one exception, my recollection at this time furnishes me with but one slight rain during its continuance.

The thermometer for three days, consecutively, ranged as high as one hundred and two. This high temperature produced but

little effect in the severity of some of the cases, although others were aggravated partially, if not greatly. The number of cases *increased* during this period, and spread in portions of the city where it had not been. They were not, in many respects, of that genuine character common in the first instance, but bore all of the characteristic symptoms of a bilious fever; nor do I believe that many of the cases, according to my conception, could, with *strict propriety*, have been denominated yellow fever. The march of the genuine epidemic was by no means uniform.

In some families its invasion and attack was signally marked, almost every member of the same family having suffered with it. The aggravation and violence of the fever thus *manœuvreing* through families differed materially also.

In some, its grade was mild, remitting in thirty or forty hours, while in others the first stadia would last four or five days. The consistency in the same order or set of symptoms varied but little, save in violence.

In almost every case, the fever was marked by lassitude, loss of appetite, pain in the head, back, thighs and calves of the legs, with or without nausea and vomiting. Where nausea early attended the fever, oppression and pain in the epigastrium was invariably present. Such cases resulted in vomiting, for the most part. The matter thrown up, was either of a thick, glairy consistency or filled with the bilious secretions of the hepatic system or structure, and exhibited strong evidences of acidity. The dyspnœa and restlessness, in many instances, was truly distressing, and the skin was either hot and dry or bedewed with perspirable matter, truly disagreeable to the patient, as well as to the friends, on account of its loathsomeness. The peculiar offensiveness of the perspiration, on one or two occasions, struck me promptly with sensations of repugnance, and made me dread its approach from my worn out and enfeebled condition, in consequence of great fatigue and loss of sleep. The visceral torpor, in a variety of cases, *at first*, was marked with obstinacy, requiring one or two active cathartics to produce ordinary purgation, after which the milder cathartics would move, readily, the bowels. The operations, or stools, at first, were brown, or greenish, after which they assumed a dark, grumous appearance, very offensive and of adhesive consistency. This state of the bowels lasted but for a short time, or during only the first twenty-four or thirty-six hours, when the evacuations would change and become watery, with

flocculi suspended, giving to the whole a dirty, sooty color. Increase and change of gastric symptoms produced similar results upon the bowels, and their contents bore a strong resemblance to that which was thrown from the stomach.

Paucity of urine attended in every instance, save in two: one of these discharged large quantities, of rather a pinkish appearance; the other, although less in quantity, was sufficient, depositing at the bottom of the chamber containing it considerable blood, which had the appearance, through the dark-brown urine, of a coagulum, but which could be made to commix readily with the urine upon the slightest agitation of the vessel having it. The former patient died; the latter recovered—both threw up black vomit. I have never heard of a yellow fever epidemic originating in the country—consequently, believe that it properly belongs to cities, or to such places especially favoring the accumulation of filth. Putrescency or decomposition of animal matter, *perhaps*, forms a material quality necessary for its production. To what extent this would operate in producing yellow fever, of itself, I do not know, but believe that, in itself, it would be insufficient, and that the admixture of malarial atmosphere is indispensably necessary to its production. Bilious remittent fevers become aggravated when exposed to the influence of hog-pens contiguous or near to localities where bilious fevers prevail—a fact, well established by past experience, and has occurred more than once in the course of my country practice. I remember once, especially, and so noted the fact at the time, that during the prevalence of a bilious fever upon one of the swamp plantations under my professional care, that a pen containing hogs was thus situated, and that the weather became very hot and dry, and that suddenly the fevers then existing became aggravated, and that they spread much more extensively than they were accustomed to do on former occasions. The remissions were less marked; the pain in the head, back and extremities more intense, and the vomit thrown up could not have been told, by casual observation, from that of genuine black vomit. The admixture of it with water, agitated, detected readily its bilious character; so did chloride of sodium.

I have, however, seen this black matter vomited by fever patients along the course of the *Santee*, after a freshet, in the months of August and September, independent of such contingencies. It should be borne, however, in mind, also, that these freshets afford fertile sources for the production of fevers, accompanied

with black bilious ejections, independent of such means of aggravation.

These facts have induced some of the ablest, best informed, and most experienced country physicians, to believe that yellow fever is nothing more than high bilious fever, caused and aggravated by a peculiar putrescent effluvia, arising from deposits of much animal matter daily undergoing decomposition from extreme solar heat and moisture, mixing with malarial atmosphere, such as that which arises from poodle holes and trash piles in and upon the lots and streets of some of our crowded and illy ventilated cities. The same may be said of a vessel entering one of our sea-port towns with her holds filled with offensive material; malarial atmosphere enters the vessel, displaces the infectious air, drives it out upon the community, and in turn becomes infectious also.

The same laws here take place again and again, until the place is filled, in whole or in part, with this deteriorated air, which causes yellow fever as far as it extends through the community. This is the only way in which yellow fever is propagated, in my opinion, humble as it may be, and not from patients carried on shore while laboring under an attack of fever. Were the disease communicated by contagion, or persons thrown together while laboring under fever, innumerable instances could be furnished to put forever at rest any difference of opinion upon this subject.

Scarcely ever has an epidemic yellow fever prevailed, but that more or less of the inhabitants residing in the place of its occurrence have not sought some place of refuge and safety among the hills and mountains of our back country, some of whom imbibed the seeds of yellow fever prior to their leaving the seat of its origin, and who were afterwards seized with the fever, and died, having thrown up black vomit. No one has ever been known, so far as I have been informed, to take the fever from such persons. During the past season's epidemic, two of the most aggravated cases which I saw were persons from Charleston, who took the fever immediately after they arrived here, both of whom died; and not another case of fever occurred in either of the houses in which they stayed, notwithstanding there were many inmates belonging to both, and who kindly officiated in every act of friendship. Of one of these patients I had the professional care, and was consulted whether he should not be carried to the hospital, in consequence of most of the boarders being strangers, and who felt some scruples of conscience—remaining in the same house with

one who had yellow fever—lest they should take the fever and suffer themselves. The proposal to remove him being negatived, at the same time giving my reasons, farther fears were not apprehended, and they all escaped the fever, although they were in and out of his sick chamber repeatedly through the day and at night, and sat up, in turn, with him until his demise.

If, on the contrary, friends from the country visited the sick, in parts of the town where the fever had its hot bed of origin, (which did occur several times in the course of and during the epidemic,) and remained for several hours, or until afternoon—then returning again into the country, without remaining a night even, in town, they were apt to take the fever: several of whom did take it, and I have understood one died of black vomit, proving, conclusively, in my mind, that the fever had been imbibed and taken in town, by exposure to the same atmospheric influence which produced it in the case of the friend visited. This latter circumstance has been selected as an argument, by several of my friends, to prove the contagiousness of yellow fever, without properly appreciating its legitimate source and origin, *although* none of the members of the family in the country had the fever, or took it from the patient who visited the sick friend in and at the seat of its origin.

Reasoning from analogy, I would suppose that an individual who had taken the fever from visiting one laboring under yellow fever in town, where it prevailed as a contagious epidemic or disease, could, by the same laws of contagion, impart the disease to others in the country, and that this would be the result invariably of contagious fevers when and wherever exposed to their influence. No such results have ever taken place; consequently, I would suppose, that yellow fever epidemics know no such laws as contagion, and do not visit such influences upon which *yellow fever origin depends*, upon the innocent, who have borne no part in its production, provided they keep away from the seat of its incubation, where no right of distinction or exemption is acknowledged. Many facts have been adduced of a second attack, in the same individuals who have once had yellow fever; nor do I doubt for a moment the validity of such statements, but mention as a fact, also, that since my attack, many years since, as often as I have been exposed to it, that I have ever since enjoyed a perfect exemption, not only from yellow fever, but from every other of a malarial origin—and hope to enjoy a long continuation of the

same blessing under Divine Providence and protection. I met with an individual here, also, during the last epidemic, who had genuine yellow fever with black vomit, taken in one of the *Indias* some twenty odd years since, who mentioned the same fact. He left the place of his attack and went to the North, where he remained some ten or twelve years, after which he visited *Orleans* during a yellow fever epidemic, remained there during its whole period, without ever having fever of any description, then returned North and remained there again as long, if not longer, than he had done in the first instance, or until last year, when he determined to visit Augusta, which he did some time in June or July, and remained here during the whole of the epidemic, escaping also fever of every description. It may be possible that a second occurrence of fever greatly depends upon the genuineness of the first attack, or upon the condition of the constitution.

The terminations of yellow fever, by no means, depend upon its violence. I have seen apparently a mild case, suddenly aggravated by an arrest of one or more of the depuratory organs, that promised nothing unfavorably in its commencement, and I have seen cases apparently the most malignant, yield favorably to the supervention of some critical discharge or other. Epistaxis was of frequent occurrence, and when not continued for a length of time, or very profuse in quantity, seldom failed to afford benefit by relieving the fullness and tension about the head and promoting the action of the skin. The gums frequently bled, and in several cases had to be plugged with cotton wetted with kreosote, before the hemorrhage could be arrested; at other times, there was nothing more than a slight oozing, which would collect upon the teeth in the form of disagreeable sordes, and could only with difficulty be washed off. Diarrhœa occurred in several cases, and was unfavorable, seldom failing to produce sudden and violent collapse, thereby increasing the danger and occasioning great loss of strength, from which the patients could only be roused with difficulty; suddenly, profuse and cadaverous perspiration, was pathognomonic of great danger. The deep coffee-grounds urine could be changed suddenly into an intense green color, by the addition of a small quantity of nitric acid, especially after the icteric condition of the skin made its appearance. Œdematous swellings of the extremities would sometimes occur. General or anasarcous accumulations seldom made their appearance, and when they did occur, the recoveries from them were slow or protracted,

unless free diuresis could be produced. Where this was effected by proper medication, the swellings receded instantly. The yellowness of the skin was absent, or nearly so, in many of the cases, and I am under the impression that it was not so characteristic in the past year's epidemic as I have witnessed in former epidemics; several cases, however, were well marked in this respect, and all of the genuine forms of the fever partook of this hue slightly. Obstinate and long-continued hiccough was present in *several of the cases*, and especially so *in one;* its duration was of six or eight days continuance. There was nothing remarkable about the pulse, and its frequency and volubility varied but little from what you find in fevers generally; it would sometimes number 120 or 130 to the minute, but was often much lower, and soft and compressible. The tongue, at first, was white, with red edges and tip, but soon grew brown or black, dry, rough and hard, and presented a swollen appearance very often.

Treatment.—No particular routine of treatment was pursued by me. Symptoms were carefully regarded and looked into, and the treatment adopted accordingly. Most frequently, however, the treatment was commenced by giving Calomel, Ext. Colocynth Comp. and Pulv. Rhei.

℞ Calomel, ... grs. 10,
Ext. Colocynth comp. . " ℈ss.
Pulv. Rad Rhei, . . . " ℈ss. Ft. pulv. No. j.—

Administered in syrup of any kind. If irritability of the stomach was present and this dose ejected, warm water was freely given, so as to vomit and cleanse the stomach, or a simple dose of ipecac substituted in its stead. The above dose of calomel, colocynth and rhubarb, followed immediately the administration of the warm water or ipecac, when the first was thrown up, and if its operations were insufficient, it was assisted by drinking Epsom salts dissolved in snake-root tea (Serpentaria Virginiana) every two hours, until free purgation was produced. If the operations were not changed in character, becoming more natural, less offensive and presenting a less bilious appearance, the calomel and colocynth and rhubarb was given until this state of things were brought about; after which the chlorate of potash was given and continued until perfect convalescence took place, which was generally very rapid under the judicious administration of the potash. This article (chlorate of potash) seemed to answer every requisi-

tion after the congestive stage of the fever was broken down by cathartics. Patients recovered more rapidly, nor was there the same amount of debility, so far as I could discern, following its use.

I am aware of the prejudices of very many of the profession, with regard to the free use of calomel in the treatment of malignant fevers generally, and regret to say that my experience did not confirm the opinions of others in its use in the treatment of the late epidemic yellow fever. I used it frequently in the first and second stages of the fever with the happiest results, although I did not use it to such an extent as to produce ptyalism in a solitary case. When the medicine (calomel) was used, after the first thirty-six or forty-eight hours, it was administered in small and frequently repeated doses, with a view to its operative or purgative influence. Seldom, however, was its administration in ten grain doses necessary longer than this period, unless in those pseudo forms that observed regular exacerbations and remissions once in every twenty four hours—then I used it as long as the fever continued to run this course, once every day, every other day or every third day, precisely as I have been in the habit on all former occasions of using it for the cure of bilious fevers, and with the same happy effects. The necessity for a further use of calomel being at an end, the alkaline practice was again taken up and persisted in—to this was added the snake-root tea and spts. nit. dulc. freely, liq. ammon. acetat., brandy and quinine. If the bowels grew loose under this course, thirty or forty drops of the tinct. opii acet. were added either to the alkaline mixture or to the liq. ammon. acet., which speedily set every thing to rights. If, on the contrary, the bowels were constipated, one or two pills, composed of ext. colocynth comp. rhubarb and magnesia, were ordered every two or three hours, with enemata, until the bowels yielded and one or two operations were produced. A bath, of warm water with mustard, for the feet, was used repeatedly, and the extremities, body, and especially along the course of the spine, were rubbed with strong pepper tea, brandy, mustard and turpentine. To relieve black vomit, which occurred fifteen times, despite of every exertion to the contrary, liq. ammonia acetat. was given as follows:—℞ Liq. Ammon. Acet. ℥viij.*

Tinct. Opii. Acet. ʒij.—m. s. A tablespoonful was given every hour or two in a wine-glassful of strong snake-root

* The Liq. Ammon. Acet. was prepared of pure apple vinegar, instead of the distilled acet. acid of the shops, allowing the ammonia to be in excess slightly.

tea, and if a blister had not been previously applied to the epigastrium, one was *immediately applied* and suffered to remain until free vesication was produced. I was governed in the application of the blister to the pit of the stomach, by the condition of the gums and the appearance of the vomit previous to the discharge of *black vomit*, by the normal or abnormal standard of the pulse, the natural or reduced temperature of the surface, and the appearance or expression of comfort or ease, or of extreme uneasiness and restlessness. Blisters were also frequently applied to the extremities, to equalize the circulation and restore general warmth. The liq. ammon. acet. arrested the vomiting in every instance save one promptly.

I have, as succinctly as circumstances would allow in an article like this, detailed my general plan of treatment. It must be remembered, however, that other remedies were used in the course of my practice in many of the cases, that proved highly serviceable, of which I have not spoken, but feel satisfied as to their results. During the whole course of the epidemic, I treated two hundred and seventeen cases of fever, of which fifty odd were genuine yellow fever cases—fifteen of whom had black vomit. Of the entire number of the genuine cases, four deaths followed the treatment. No deaths occurred in any of the pseudo forms of the disease, with the exception of one, who died of pneumonia with dysenteric symptoms, from getting wet in the rain alluded to, while driving a dray some three or four weeks after his attack.

ARTICLE XXXII.

Case of Hysterical Monomania, following Parturition—with remarks on Diseases of the Os Uteri. Read at a meeting of the Georgia Medical Society, by P. M. KOLLOCK, M. D., Professor of Obstetrics and Diseases of Women and Children in the Savannah Medical College.

August 12, 1854. I was called, in consultation with Dr. J. B. Read, to Mrs. L——, an Irish married woman, of very respectable and comfortable condition in life; quite youthful; of healthy appearance, having a good deal of colour in her cheeks.

She was delivered of her first child about twelve days before I saw her, by a negro midwife. I was informed that the accouchement was attended with considerable difficulty and hemorrhage, and resulted in some laceration of the perineum. The child was puny

and unhealthy—its body being covered with large bullæ. About five days after delivery, Mrs. L. began to exhibit symptoms of mental alienation, having been very much excited and alarmed by the death of a next door neighbor, from yellow fever, which occurred about this time. Her mental affection has been gradually growing worse; and at this time (Aug. 12) she is perfectly unmanageable. She strips off all her clothes; walks about her chamber, or lies down on the bare floor; imagines that her left side is entirely dead; exposes her naked person, particularly her genital organs, and insists upon our "taking out" her "side," which, she says, is very offensive to the smell. She neither sleeps night nor day; knows all her acquaintances, and converses rationally on all other subjects but the one which is the theme of her hallucination. The skin is cool, pulse natural, tongue clean; but there is a nervous tremor of her limbs, and her case resembles, very much, one of delirium tremens. Her habits are said to be temperate. Her bowels have been freely operated on, by castor oil, within a day or two.

The examination of her case resulted in the prescription of camphor emulsion, with laudanum and beef tea, and perfect quietude in bed, in a dark room.

Evening, 5 o'clock. The medicine was given regularly, as directed, until she fell asleep.

Aug. 13. Has spent a quiet night; but about 8 o'clock a. m., her maniacal symptoms returned.

We visited her at 9½ o'clock, and found her lying on the bare floor, entirely naked, and labouring under the same delusion in regard to her side—calling upon us to "take it out," at the same time applying her fingers to the labia, and displaying the genitals. The pulse and skin had undergone no change; the pupils of her eyes were very much contracted, even when not exposed to strong light; and we thought it probable that this might be occasioned, in some measure, by the laudanum which she had taken in combination with camphor emulsion. A blister was now prescribed, to be applied to the nucha; and the camphor mixture to be continued, with tr. conii., as a substitute for laudanum, (℥j. at each dose.)

1 o'clock p. m. We found her quiet, and disposed to doze; skin hot, and covered with profuse perspiration, occasioned, in a great measure, by the intensely hot weather of the season. A continuance of the treatment was directed, according to circumstances.

5 o'clock p. m. Very much the same; not sleeping. ℞. Ol. ricin. ℥j.

10 o'clock p. m. Found her quiet; cathartic had not operated. ℞. Stimulant enema into bowels; continue the narcotic, if necessary.

Aug. 14. Cathartic has operated. She is quiet, but still laboring under the idea that her side is dead. ℞. Tr. castor. comp. ℥j. every three hours.

Evening. More rational; admits now that her side is alive and well; complains of tooth-ache. ℞. Continue tr. castor.

Aug. 16. Although her mind is not entirely restored to its healthy condition, she is much more rational, and continues to improve.

Dr. Reid being attacked at this time by the prevailing epidemic, the case was left in my hands.

As she became disgusted with comp. tr. castor, I substituted a mixture of equal parts of Hoff. anod. and fluid ext. valer., and put her upon a course of pills of hyd. fer. cyan. ferri.

My regular attendance on her ceased on 24th Aug. I directed her to continue the use of the pills for some weeks.

I saw no more of her until October 2d, when I was desired to visit her, and prescribe for pain in the back and lower part of abdomen, and for a very profuse and offensive purulent discharge from the vagina. Her general health at this time was good, and her mind perfectly rational. I informed her that I presumed that she was labouring under uterine disease, and suggested an examination, for the purpose of verifying the diagnosis. To this she submitted.

The introduction of the finger into the vagina discovered a granulated feel of the lips of the os uteri, which was confirmed by the exhibition to the sight, by the speculum, of a pretty extensive ulcerated surface occupying the anterior lip, which was concealed by a dense covering of muco-pus, and which prevented a satisfactory view of the ulcerated surface, until it was wiped away by a tuft of cotton conveyed to the part by means of the uterine forceps. This ulcerated surface I immediately cauterized freely and deeply with "Vienna paste," taking care to confine the action of the caustic to the diseased part, by the application of vinegar, as soon as I considered myself sure of the full effect of the application in producing a slough of sufficient depth.

I examined her again on the 7th, and finding that the cauteriza-

tion was sufficient for the time, I directed her to inject into the vagina, two or three times a day, a solution of sulph. zinc, ʒj. to water Oj.

I left Savannah on the 10th day of October, and did not return until the middle of November. I called and examined Mrs L. a few days after my arrival, and found the ulceration entirely healed. The purulent discharge had ceased, and she was entirely relieved of all troublesome morbid symptoms.

The case which has been detailed is one, of a large number, to be daily met with in practice—the symptoms of which would indicate the lesions of organs distant from, and, apparently, totally disconnected with the uterus, but whose origin is in the uterus or its appendages; and the affections to which the rational symptoms point, are merely sympathies, whose permanent relief is only to be effected by remedies addressed to the local uterine affection. It is true, these sympathies, after having received the impulse, become, to a certain extent, real, and demand a combination of palliative remedies addressed to themselves immediately, and a temporary calm may be effected through their means alone. But it is very apt to be *only* temporary, and a repetition of the annoying scene may generally be anticipated.

In the case just described, I have no doubt that the ulcer of the os uteri was the main cause of the whole train of alarming symptoms with which this woman was affected. The causes of these ulcerations are, no doubt, very various; they are—difficult labours, (instrumental, or otherwise,) abuses of sexual intercourse, engorgements of the uterine cervix, ending in inflammation or excoriation of the lips, produced by the numberless causes of deranged menstruation. The ulcer may have existed previous to pregnancy, or even coition, and may have been aggravated by these causes, subsequently applied.

The mental alienation and hallucination, in one case, were, doubtless, the effects of excitement of the nervous system, developed by the alarm and depressing influence of her neighbor's death. The palliative treatment allayed this excitement for the time; but as long as the ulcer of the os uteri remained uncured, there continued to exist a punctum saliens, a starting point, predisposing to repetition of her paroxysm, whenever a competent exciting cause should be applied for its development.

These affections of the uterine mouth are exceedingly common,

and cannot be recognized without the aid of the speculum. Their most prominent symptoms are usually those of the sympathetic affections of other distant organs, such as—cough, pleurodynia, headache, backache—the whole train of dyspeptic signs; constipation of bowels, and the varied numerous forms of hysteria. Of the local symptoms, the most common and constant is leucorrhœa; sometimes menorrhagia. Menstruation is not always deranged, and impregnation is not prevented.

The speculum reveals various grades of morbid affection, from inflammatory engorgement of the lips of the os uteri, slight abrasions, or excoriations of the mucous membrane, to an ulcerated, granular surface, more or less deeply excavated, or fungoid.

The anterior labium is most frequently affected; but often both are involved in the disease, and the ulcer extends to a greater or less height into the cavity of the cervix. The cervix is usually somewhat indurated—the os is retroverted, and is with difficulty engaged in the field of the speculum, so as to obtain a satisfactory view. The granulated surface is covered with a tenacious mucopurulent secretion, which is wiped off with difficulty; and when the glands of the cavity of the cervix are affected, a semitransparent and glairy exudation hangs out between the lips of the os uteri, which is not easily removed. This condition of the os and cervix is frequently accompanied by congestion of the anterior or posterior wall of the body singly, or by congestion of both at the same time, which are tender to the touch; and the patient complains of pain when the point of the finger is thrust up against it. Some irritation of the neck of the bladder, occasioning either painful and difficult micturition, or incontinence of urine is not an uncommon attendant on these uterine affections. And the irritation may even extend to the rectum, producing troublesome tormina and tenesmus.

The Treatment of this class of affections consists in a combination of topical and general measures. The kind and activity of the first, will depend upon the state of the parts, as evinced by the vaginal touch, and the speculum. The touch proves the presence or absence of induration of the labia, cervix and body of the uterus, as well as the degree of the induration; also, the existence, or non-existence of inflammatory tenderness, and the temperature, whether normal or abnormal of these parts.

A tumefaction of one or both labia, which has been indicated by

the touch, will also be observed by the eyesight, on the introduction of the speculum, accompanied frequently with inflammatory redness of the mucous membrane covering the lips, without any abrasion, or ulceration.

For this condition, I am in the habit of employing free incisions with the convex edge of a scalpel, fixed on a handle of sufficient length. Where the inflammatory congestion is intense, this produces a free discharge of blood, and depletes the part very effectually; and the bleeding is prompted by injections of warm water into the vagina.

The scarification is to be repeated at intervals of several days, as often as may be necessary, to subdue the local inflammation entirely, which is known by the disappearance of redness and tumefaction.

When the inflammatory tenderness and swelling extend into the cervix and body, it may be requisite to apply leeches to the cervix, vulva, or hypogastric region.

When leeches are applied to the cervix, they, of course, must be introduced through the speculum, in the manner recommended by Bennet. It is advisable to plug the os uteri with lint or cotton, to prevent their making their way into the cavity of the uterus, as I have known them to do.

The slight abrasion, or excoriation of the lips of the os uteri, unattended by inflammation, are healed by slight touches of nit. argent. in substance, or in solution of proper strength, applied by means of a camel's hair-brush. And these applications are also sufficient for a granulated surface, provided the granulations are small and healthy in appearance.

Where the granulations are large and fungoid, and the surface pretty extensive, the cure will be facilitated, and more speedy, if stronger caustics are employed. I am in the habit of using acid. nit. of mercury in some cases, and in those still more grave, Vienna paste.

The nitrate of silver may be applied once in three or four days, acid. nitrate not so often, and Vienna paste not oftener than once a week—and sometimes a still longer time is requisite for the separation of the slough. The caustic is to be passed up into the cavity of the cervix when the ulceration extends so far. While these applications are being made, the patient is directed to inject two or three times a day into the vagina, warm or cold water, as may be most agreeable to her feelings.

As much rest in the horizontal position, as is consistent with the general health, is to be enjoined; as well as abstinence from sexual intercourse;—after cauterization has been carried to a sufficient extent, to be decided by the tact and experience of the surgeon in the treatment of ulcers in general, the cure may be completed by injections into the vagina of solutions of sulphate of zinc or alum, (℥i. to water Oj.)

The most convenient instrument for the purpose of injection, is one of the various patterns of injecting pump, provided with flexible tube of sufficient length, served with a terminating bulb, perforated with several holes, which enables the patient to inject any quantity of liquid without withdrawing the tube.

The woman is directed to sit up over a foot-tub or bidet, insert the tube as far as possible, and pump in a pint or more of warm or cold water. She is then to lie down, her hips elevated on a shovel-shaped bed pan, the tube to be introduced as far as possible into the vagina, and a pint of solution of sulph. zinc or alum, of the strength indicated, to be pumped into the vagina from a vessel standing on the bed, or by the bed-side. She may either have an assistant to pump for her, or by a little skill on her part, in manipulating, combined with practice, she may do it for herself. The injection is to be used two or three times a day.

After injecting with solution of zinc or alum, it is requisite for her to remain in the horizontal position for some time, in order to retain as much as possible of the solution in contact with the diseased surface.

For the purpose of combatting the sympathetic and constitutional affections which are usually attendant on such cases, it is requisite to employ general, in combination with topical treatment.

The dyspeptic symptoms are to be met by proper diet, antacids, and those articles which have the power to allay gastralgia—such as nux vomica and bismuth.

Constipation is to be obviated by laxative diet and medicine—of these last, I use comp. ext. colocynth, conserv. sennæ, &c.

Anæmia (which is common) is to be treated by chalybeates—syr. iod. ferri. is an efficient remedy where the anæmia is conjoined with induration of the cervix and corpus uteri.

Hysterical affections require anti-spasmodic and narcotic articles: tr. castor. comp. gum fœtid., Hoff. Anod., and valerian.

Although rest in the horizontal position, as much as possible, is requisite, moderate exercise in the open air is necessary, in order

to preserve the general health. This had better be taken in a carriage.

These cases of uterine disease are exceedingly tedious, and trying to the patience of both physician and patient. Their treatment usually occupies from one month to six or eight, or twelve.

As has been stated, the most prominent symptoms are referable to the lesions of distant organs—sympathising with the uterus—and divert the attention of both patient and physician from the principal disease. On this account, this last is very usually overlooked, and if perchance, by reason of the obstinate persistence of the sympathetic phenomena, in spite of general treatment, it should be suggested that probably uterine disease is the source from whence they spring, the difficulty of making the patient comprehend such logic, combined with the almost unconquerable aversion of females in every grade and condition of society, to the topical investigation of their cases, present obstacles in the way of proper and effectual treatment, productive not only of extreme embarrassment, but frequently total failure.

Although the topical treatment in these cases is exceedingly important, and in a large number completely successful; being followed by an entire cessation of all annoying ailments, which afflicted the patient, it must be admitted that cases are occasionally met with, which defy even this treatment, and in which many distressing symptoms persist, after the perfect cure of an ulcerated os uteri.

The poor woman continues to be annoyed by back-ache, constipation of bowels, leucorrhœa, dysmenorrhœa, and occasionally menorrhagia—with many hysterical affections.

In such cases, we are obliged to extend our investigations beyond the mouth of the womb for the source of her malady. It may chance to be a chronic inflammation of the lining membrane of the uterine cavity, a neuralgic condition of the uterine nerves, a subacute ovaritis.

If the inflammatory affection of the uterine cavity be the cause, it may be benefitted by leeches to the cervix, vulva, or hypogastrium. If it be an ovaritis—which may sometimes be discovered by a feeling of pain, when the iliac region is pressed, or by the contact of the point of the finger introduced into the vagina and thrust up against the ovary, or the fore-finger in the rectum and thumb in vagina, forcing up the perineum and including the ovary between the thumb and finger, as recommended by Tilt—the proper treatment would consist in a repetition of leeching, cupping

and blistering over the region of each ovary, alternately, and followed by mercurial friction over the same region, or emp. gum. ammon. cum. hydrarg. over the same part.

A steady perseverance in such a course, for a sufficient length of time, may be followed by a cure more or less complete.

If pain should continue to annoy the patient, after such means have been fully tried and tested, it is probable that it is a purely neuralgic affection—to be cured, or palliated, by narcotics and chalybeates.

Of the narcotics, I find nothing superior, in certain cases, to the aconite. It may be taken internally, in the dose of 5 or 10 drops of the tincture, two or three times a day, or applied externally to the lumbar spine, by compress wet with the tincture and covered with oiled silk.

I have seen it stated in a periodical, that Jobert, who prefers the actual cautery to the chemical caustics, in the treatment of the ulcers of these parts, also uses it for the cure of the neuralgic affections, passing the cauterizing iron, at a white heat, through the cervix into the uterine cavity. His treatment is said to be attended with success. "C'est possible."

ARTICLE XXXIII.

LETTERS FROM SAML. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY

LETTER NO. 5.

MONTGOMERY, ALA., Aug. 23d, 1855.

Messrs. Editors—On a former occasion, I stated that congestion had its origin and seat in two principal points, namely, the capillaries of the pulmonary artery and the capillaries of the portal vein, and that obstruction to the flow of blood and its accumulation in the veins, from a variety of causes, such as pressure from ligatures, from tumors, from gravitation, &c., which occurs under a variety of circumstances, and which, in the general acceptation of the term, constitutes congestion—is not embraced in the present view of the subject as a distinct pathological condition.

Having examined the subject with reference to the origin of congestion in the lungs, I will now proceed to examine it with respect to its origin in the liver, not separately, however, but as under the same general pathological condition, having their origin in the same general causes of depression.

The liver, on account of the peculiarity of the portal circulation, is liable to congestion under a variety of circumstances; as, from congestion in the lungs and heart, and the accumulation of blood in the large venous trunks, whereby the hepatic vein and its radicles become congested, and thus obstruct the flow of blood in the portal capillaries; and no doubt, the liver, as well as the brain, is often congested in this manner—for we can scarcely imagine the existence of an extensive pulmonary congestion without producing such results; but the liver thus congested, can lay no claim to pathological consideration—the congestion being but a sequence, or the effect of pulmonary congestion. The liver may be congested, from a too rapid influx of blood from causes of excitement, whereby the hepatic artery and its ramifications become engorged, and thus obstruct the flow of blood in the portal veins, as engorgement of the bronchial artery and its branches obstructs the flow of blood in the pulmonary capillaries, in pneumonia. It may be congested from obstruction in the biliary ducts, from irritation, spasm, &c., and from accumulations of viscid or inspissated bile in those vessels. These different causes of congestion of the liver, will receive their appropriate consideration; but that which claims our present attention is congestion, from depression, in the capillaries of the *vena portarum*.

Heretofore I have withheld the expression of any opinion, as to the manner in which depression produces congestion: upon this point, I adopt what appears to be the most rational theory advanced by physiologists and pathologists, namely—that *debility* and *depression* produces *relaxation* and *enlargement* of the calibre of the capillaries, whereby the blood is retarded in its flow, and consequently accumulates in the larger vessels, giving rise to engorgement in the arterial branches, when the systemic capillaries are involved, as in cases of inflammation, and to congestion of the venous trunks, and even radicles, when the venous capillaries are involved. Apart from the influence which congestion in the lungs may exert in establishing or keeping up congestion in the liver, supposing each to be under the influence of the same causes of depression, we must suppose, that depression in the capillaries of the vena portarum retards the flow of blood in them, which accumulates in all that vessel, constituting portal congestion—suspends the secretion of bile, interrupts the elaborating and depurating functions of the liver, whereby the blood is sent to the lungs, in an *unprepared* state, for the generation of heat, for its further depura-

tion and its perfect arterialization, and thus giving rise to causes of still greater depression and congestion. Another more ostensible effect of portal congestion, and which seems *almost* to constitute a *part* of the condition, is obstruction to the flow of blood in the systemic capillaries of those organs whence its blood is derived, producing engorgement in those vessels and the minute arterial branches; giving rise for the time to a sense of oppression and distress in the epigastric, hypochondriac and abdominal regions, and producing nausea, vomiting and purging, and not unfrequently hemorrhage. But these effects do not constitute *all* the inconvenience and danger resulting from the engorged state of the capillaries in those organs, from portal congestion; for a continuance of such a condition of those vessels, will ultimately give rise to more or less irritation in them, whereby more blood will be sent to them, still further increasing their engorgement, and finally the irritation will spring up into inflammation, in some one or more of those organs most liable to take on such action. These results which grow out of portal congestion, from whatever cause it may be produced, is more commonly the result of the operation of causes acting *directly upon the liver*, in the manner which has been explained, and which may not act with sufficient force to bring the whole system directly under the influence of depression; hence the frequent occurrence of those complications which we recognise as *bilious*, in all our fevers, symptomatic as well as idiopathic, and in none are they more often found to exist than in pneumonia.

Although it is one of the chief offices of the lungs to purify the blood, by relieving it of its carbonaceous impurities, it is the office of the liver, not only to eliminate the impurities from the blood, by the secretion of bile, but to *elaborate and prepare the blood* for the important changes to be effected in and by the lungs; and, if the liver fails to perform its office in this respect, either from the continuance or the frequent occurrence of portal congestion, the consequences will be, that the blood will become so much vitiated and depraved in its constitution, as not only to render it unfit for the performance of its proper offices, but to render it a positive poison to the great nervous centres—thus *increasing* and rendering *general* the nervous depression and congestion, which before may have been but local. It is in this manner, and to this cause, that we would ascribe the fatal termination to so many cases of pneumonia, in which there has been no evidence of the existence of a sufficient amount of inflammation in the lungs to produce such a

result. It is to this cause that we ascribe a fatal termination to so many cases of intermittent and remittent fever, described under the name of "pernicious," in which, in each succeeding paroxysm, the congestion deepens and soon results in a general and overwhelming congestion, and in which there has been no evidences of the existence of inflammation, either before or after death. It is to this cause, namely, the vitiated and depraved state of the blood, from the suspended functions of the liver and other depurating organs, that we ascribe the terrible effects in yellow fever, in which a single fever will effect as great an amount of depression as several paroxysms of ordinary malarial fever will be required to accomplish. I would not be understood as maintaining that portal congestion (although it is often present) gives rise to the malignant features in yellow fever; yet it would require a longer array of arguments and facts, than has heretofore been presented, to convince me that the liver has not an important agency in the production, not only of the malignant features of that form of fever in its *stage* of *depression*, but also many of those which belong to its stage of *excitement*, or *hot* or *febrile stage*. What that agency is, I will probably attempt to explain hereafter, when I come to speak of the nature of remedies best suited to the condition of this and other important organs and systems—as at present I must confine myself to the general causes of depression and congestion, and the effects which grow out of that condition. Among the phenomena, or symptoms, which I have described as belonging to the different forms and modifications of pneumonia, are to be found the *appearances* of the tongue and the *condition* of the *stomach* and *bowels*;—although disturbance in these organs does not furnish symptoms *characteristic* of pneumonia, yet, their constant attendance upon that disease, as well as other forms of fever, and their being modified by the existence of excitement or depression in the system, entitles them to special consideration—more especially as they have their chief origin in congestion and suspended or disordered function of the liver. These symptoms may be classed, as we have classed the skin and pulse, in the opposite condition of excitement and depression, and say, as a general rule, that the tongue, in cases of excitement, is *small* or reduced in size, is *hot* and *dry*, and that in those of depression it is *enlarged*, *cold* and *moist*—and so of the bowels, in cases of excitement, they are *dry* and *constipated*, and in depression, they are *moist* or *liquid* and *inclined* to *purge*.

Before I proceed to examine into the different appearances of

the tongue in these different conditions, and having just noticed some of the consequences of portal congestion upon the capillaries of those organs whence the blood of the portal vein is derived, it may be further remarked, that those organs which are situated nearest to, and are in more direct communication with the liver, will be the first to feel the effects of the portal congestion; hence, nausea and vomiting, and a disposition to purge, are often found amongst the first evidences, or effects, of such a condition of the liver. I would not contend that these symptoms, or effects, might not arise from other causes besides portal congestion, but in all cases of general depression and congestion, I would assign them to that cause, in the absence of other well known causes, for their existence. And even in cholera, which seems to be a *congestive diarrhœa*, assuming often an epidemic form, I have some doubts, whether congestion of the portal system does not form one of the first and most important links in the chain of morbid phenomena, and that the vomiting and purging are but consequential, though important results. But, from whatever cause these effects are produced, there can be no doubt but that the irritated, and often enfeebled and engorged condition of the capillaries, allows the thiner and more watery portions of the blood to percolate, and escape through the stomach and intestines, and in such quantities, sometimes, as seriously to affect the constitution of the blood—thus rendering it thicker, or more viscid, and consequently more difficult of circulation. Such is often the case in cholera, and other kindred affections. And not unfrequently is the blood itself allowed to escape through the enfeebled capillaries, giving rise to hemorrhage from the bowels, particularly in some forms of congestive intermittents. The evil effects of these drains upon the circulation, are, that the fluids, thus drawn off, come directly from the arteries, which are already deficient of blood—thus increasing the dangers of congestion, without relieving the congested vessels. It is sometimes the case, that hemorrhage occurs from an enfeebled and relaxed state of the capillaries, where there is no sufficient reason to suppose that congestion of the portal system exists.

An interesting case of this sort occurred in my practice a few years ago. Dr. J., now a practicing physician in this city, when a youth, ten or twelve years of age, having been at play, and taken violent exercise, became highly excited and fatigued, and, laying down under the shade of a tree, fell asleep; when he awoke, he was found to have croup, or something similar, for which I was

called to see him. While attempting to relieve him of this, I discovered signs of hemorrhage from the gums and tongue, which rapidly increased, until he bled from his nose, mouth, bowels, bladder, and skin, wherever there was any recent scratch, scab, or pimple. In this condition of things, although there was considerable action of the heart and arteries, I was afraid to use the lancet, on account of the quantity of blood which he was losing, and, acting upon the belief that the hemorrhage resulted from an *enfeebled* and *relaxed* condition of the capillaries, from *previous excessive action*, I used opium and sugar of lead pretty freely, to reduce the action of the heart and arteries, and applied the coldest water to be obtained, freely to the whole surface, but more particularly to the head and body. Under this treatment, the croup symptoms soon entirely disappeared, and the hemorrhage gradually subsided, and in a few hours entirely ceased, leaving him feeble and anæmatous, from which he was gradually relieved by a course of mineral and vegetable tonics, exercise, &c.

I have mentioned this case, as an example of those cases in which "the want of *innervation* is not equal in the whole circulation," and in which the power of the heart is not enfeebled in proportion to the capillaries—a condition most usually to be found in intermittent and remittent fevers of the *congesto-irritant* forms, and in which, if there is no hemorrhage, there is often profuse sweats and diarrhœa, and the fluids seem to be *forced* through the extreme vessels, by the "vis a tergo," rather than to strain or filter through them, as they do in *congestive* cases, in which the heart shares alike in the "defective innervation" with the capillaries. This case serves as an example of *extreme feebleness* of the capillaries, resulting from *excessive action*—a condition similar, if not identical with the condition of the capillaries, which occurs in typhus and typhoid fevers. In the typhoid stages, of the higher grades, and inflammatory forms of bilious fevers, in which a longer time, and a succession of paroxysms, is required to accomplish the work; and in yellow fever, in which the hot or febrile stage, of a few hours' duration, is sufficient to accomplish it, giving rise to hemorrhage, or a hemorrhagic tendency in all these affections. Although these phenomena do not belong to congestion, as a general pathological condition, yet they are often connected with, and aggravated by, if not directly produced from, congestion and suspended functions of the liver.

But as this subject will engage our more particular attention

hereafter, I will proceed to examine the appearance of the tongue, with reference to the different forms and degrees of congestion.

While those general signs which have been described—such as the condition of the skin, the state of the pulse, &c., serve to indicate the *degrees* of depression and congestion, the appearance and condition of the tongue serves, not only to show the *degree*, but the permanency or duration of the condition. It is not, however, so important and valuable a sign, or index, to the general condition of the system, as it is to the congested state of the liver, and the deranged and suspended functions of that organ, which, in my very decided opinion, gives rise to the *complications* before spoken of, and constituting the chief danger, not only in pneumonia, but in all the graver or more malignant forms of fevers in our climate. It is by no means an easy task to explain satisfactorily the causes of all the abnormal appearances of the tongue, which is subject to such a variety of influences. I shall notice it, therefore, in relation only to its *temperature*, *size*, *color* and *fur*.

As a general rule, in cases of excitement with increased vascular action, the tongue is hot and dry; and in cases of depression and congestion, it is cool and moist—conditions which sufficiently explain themselves. It is not so with respect to size. In cases of high excitement and increased vascular action, when the arteries and the capillaries are in a state of hyperæmia, we would very naturally conclude that the tongue would share in the general condition, and consequently present an enlarged appearance; and that in cases, of the opposite character, when those vessels are measurably anæmatous, the tongue would appear contracted and diminished in size; but observation shows exactly the reverse to be the true state of the case, and that these appearances of the tongue, as to size, do not depend upon the excess or deficiency of blood, but upon the *tone* and the muscular *contractility*, which, being considerable in cases of general excitement, presents the appearance of being contracted and diminished in size, being flattened, rounded and pointed, and being, more or less, red, hot and dry, according to the degree of excitement, and the nature and seat of the disease. And in cases of general depression and congestion, the tongue participates in the *depression*, loses its ordinary powers of contractility, and becomes *large*, *broad* and *thick*, and pale, cool and moist. This enlarged appearance or condition of the tongue, I was for a long time in the habit of considering as a consequence, and as one of the phenomena of congestion, from its almost invariable

attendance upon that condition. It is true, that in extreme cases, especially when the jugular veins become congested, the tongue becomes so, presenting with the lips a livid rather than pale appearance, and it may be and often is, enlarged from inflammation in the organ itself, when, besides being enlarged, it will generally be red and turgid. It is generally enlarged in cases of salivation, and in acute inflammatory affections of the throat, as in laryngitis, &c.; but these cases do not materially impair the value and importance of its appearances, as a sign or evidence of general depression and congestion, as it is generally an easy matter to take into the account concurrent circumstances and the causes of such enlargement.

A more important appearance of the tongue as a sign of congestion, and one which seldom fails to indicate exactly the condition of the liver, is to be found in the *extent*, *character* and *color* of the *fur* upon its surface; and the *extent* and *color* of the fur upon the tongue, in connection with its enlargement, furnish the best evidence of the permanence of the state of congestion, the sluggishness of the portal circulation, and the torpor and suspended functions of the liver. It is often the case that the tongue is enlarged, pale, and even livid, and at the same time comparatively *clean* or *free from fur*, as in cases of sudden depression and congestion, as in the cold stage of intermittents—in cases of rapid and exhausting discharges, or as in cholera, &c.; and if taken in connection with the condition of the skin and the state of the pulse, as already described, will serve to indicate the degree of depression and congestion, which, however great, we may *infer* from the *absence* of *fur* upon the tongue, that it is the result of temporary and fugitive causes, which will subside with the return of excitement, and that the condition will not be likely to return without the renewed operation of the same cause.

It is very different, however, in the congestive forms of our malarial fevers, in pneumonia, &c., in which the tongue is always furred to a greater or less extent, and in proportion to the *extent* and *color*, together with its enlargement, we will be able to judge of the permanence of the influence of the causes of the depression and congestion, more especially so far as the liver is concerned. In such cases, the return of excitement, by reaction, according to the type of these diseases, which usually dispels almost all other traces of the condition, frequently leaves this condition of the tongue *unchanged*, which is very conclusive evidence, to my mind,

that it depends upon *portal congestion* and disordered functions of the liver, and, of course, removable only with that condition. This fur, appears to be a depraved secretion by the tongue upon its upper surface, which varies in color, from white to yellow, and brown or black, according to the condition of the blood, from which it is secreted, and the general condition of the depurating organs, and particularly of the liver. When *white*, it indicates that the depression and congestion will be temporary, and of easy removal, and that the functions of the liver will be but temporarily suspended. As it approaches to yellow, it indicates a greater degree and permanency of congestion—the suspension of secretion of bile, or its reabsorption into the circulation; and as it approaches to brown or black, it indicates a depraved condition of the blood, and a tendency to the typhoid and hemorrhagic condition, rather than the congestive.

Having now given an imperfect analysis of the most prominent signs and symptoms of congestion, as they are exhibited in the different forms of pneumonia, and as they are found to exist in other fevers of our climate, according to the classification which I have made of these affections—and having endeavored to explain in what manner they become involved in those bilious complications, which are so often dangerous to the patient and troublesome to the practitioner, I propose, after a few more general remarks, upon some points of pathology, connected with this class of affection, to make a practical application of the principles which I have been advocating to individual cases, as they have come under my own observation—with the double purpose, of endeavoring to establish the truth of my positions, and of vindicating the character of certain remedial agents, upon which *ruthless* hands have been laid, both inside and outside of the profession, and by which some of them, as calomel and the lancet, have been brought into disrepute, and opium and quinine are likely to be so.

As ever, yours,

SAML. D. HOLT.

On Sterility depending on certain diseased states of the Lining Membrane of the Womb: its treatment and cure. By WM. CUMMING, M.D., F.R.C.P., Edinburgh—Vice-President of the Edinburgh Obstetrical Society.

Cases of essential and incurable sterility depending on the female are extremely rare; and it is not my purpose to refer to the cause of this form. But cases of removable sterility are very numerous;

and it may be interesting to detail some of the causes of it, the treatment, and the results.

I. One of these causes is a diseased state of a portion of the lining membrane of the uterus in cases of mal-position, the diseased part corresponding with the angle formed by the flexion of the womb on itself. According to my observation, the displacement of the womb most frequently accompanying this morbid condition of the mucous membrane, is anteversion; but other forms of displacement are not exempt from disease. I am now disposed to believe that no *mere* displacement or contortion of the uterus will prevent impregnation, and that it is only when this is accompanied by a congested or ulcerated or otherwise diseased state of the lining membrane that it is a cause of sterility; and the reason of this seems to me to be, that the morbid part so flexed acts as a valve, which, while it allows a passage, painful or painless as may be, to the menstrual and muco-purulent discharges from within, refuses entrance to any fluid, such as the seminal, from without.

When these cases first came under my notice many years ago, being at that time inclined to attach more importance to mere displacement of the uterus than I now do, I attempted their cure by the means that were in use for the removal of the displacement. The chief means employed was the use of the intra-uterine pessary, on the supposition that there was no disease of the womb; but the success of this by no means corresponded to my expectations. It was evident that there was more than mere displacement, and that recourse must be had to other means; and having discovered in some (not certainly in all) a preternatural degree of tenderness and induration at the point of flexion, I was led to the conclusion that the mischief lay there, and that the treatment should be directed to that part. Accordingly, instead of inserting the pessary, I introduced bougies of different sizes till the constriction that existed at the angle of the displaced womb was removed, and followed this up by applying the solid nitrate of silver to the congested or otherwise diseased surface. The result of this was good. The painful menstruation was often removed, always relieved, a more free menstrual discharge followed, the intra-uterine leucorrhœa was by successive applications cured, and the patient in due time became pregnant. To this, of course, was added such treatment of the general system to be required.

Of this class, the following may be regarded as a not uncommon specimen:—

Mrs Z——, married three years, had before marriage been more or less out of health at the menstrual period, but after that event, had had her uterine symptoms much aggravated. She had for the two years previous to consulting me been treated by leeching, counter-irritation, &c., but without effect. She had also, on one occasion, had a bougie introduced within the os uteri, but the pain caused was so exquisite that the lady fainted, and the operation was not repeated. When she came under my care, I ascertained

that there was very decided anteversion, great tenderness at the curve of the uterus—*i. e.*, at the part where it was anteverted on itself; and when I introduced a very small bougie for the purpose of examining the os internum, there was great tenderness and clearly some constriction. The leucorrhœal discharge was not very considerable, but it was *intra-uterine*, and irritated, and almost excoriated the vagina; and it was largest in quantity about midway between the menstrual periods.

It appeared to me that both the lady's illness and consequent sterility depended on the narrowness of the os internum, and probably also on a diseased state of the mucous membrane near it. There was no congestion either of the cervix or body of the womb, nor could I detect any other functional or organic derangement.

Having explained to the patient the nature of her case, and assured her that I could not undertake the treatment unless I was allowed to treat her by dilatation, to which, from her previous experience of the bougie, she had great objection, and having reduced considerably the tenderness of the diseased part by the inunction with belladonna ointment before introducing the bougie, I succeeded in dilating the os internum, and ultimately in applying the solid nitrate of silver. The effect of this was soon perceptible. She had much less painful menstruation, more of the discharge, and of a more natural character, and the examination of the affected part by the finger was much less painful. This was repeated from time to time for three months, when she left Edinburgh for her own home. About a year after, she returned, complaining that she was not yet cured, and proposed a consultation with another practitioner, who, after a careful digital examination, recommended incision of the os. To this she would not consent, and perhaps fortunately, for she was then nearly a month pregnant, and in due time was delivered of a very fine child, since which her health has been good, and her local symptoms have disappeared. I may add, that the last time she was in Edinburgh,—I mean at the time when she was a month pregnant,—the anteversion was as considerable as it had ever been; and except that she voided urine more frequently than natural, I am not aware that she suffered in any degree from the displacement.

This is a fair sample of a large number of cases, in which the treatment is neither severe nor protracted, and the result is very successful. The probability is, that the displacement and diseased condition of the mucous membrane have existed long before marriage, but have been aggravated by it. In such cases, so far as my experience goes, dilatation by bougies, and the application of the solid nitrate, effect a cure, and are not liable to produce any dangerous or severe symptoms. In this respect the latter is much preferable to an injection of the solution—not a few disastrous results having followed the escape of the injection into the peritoneal cavity.

II. Another class of cases occurs similar to that now reported,

but without displacement of the womb. (By this term I mean flexion of the womb on itself, of so decided a character, that turn or twist it how you may with the uterine bougie it always reverts to the same mal-position, which is certainly not the case with many of what are called dislocations of the womb.)

The essential nature of this class appears to me to consist in marked constriction of the os internum, with ulceration of the lining membrane above the constriction and this ulcer often accompanied with induration of its base, and of part of the neighboring tissue. Whether the constriction precedes the ulceration or the reverse I do not pretend to say; but I have no doubt that the ulcer increases the constriction, and that the removal of the former is essential to the cure. For this purpose I invariably dilate the os externum and internum and the cavity of the cervix, and apply the solid nitrate of silver very freely to the ulcerated or diseased surface, and with the best results, by which I mean removal of the local and general symptoms complained of by the patient, and, in time, of the sterility—I say in time, for in most cases impregnation does not occur for some time after the apparent cure.

I may mention that this constricted and ulcerated state of the lower part of the uterus produces two effects, which are calculated to mislead, and do very often mislead, practitioners. It induces a hypertrophied condition of the body, and a considerable enlargement of the cavity of the uterus; and till I was satisfied of this by a (comparatively) frequent occurrence of such cases, I was inclined to regard, and did in reality often regard them as cases of hypertrophy, and so employed a treatment that not only failed of its anticipated effect, but weakened the patient, and greatly increased the local symptoms as well as reduced the general health. I am quite confident that no amount of depletion, either by leeches or scarification, and that no local application of ointment will remove the constriction and ulceration, though they may for a time relieve the congestion, heat, and irritation that generally accompany them, but which soon disappear without weakening treatment when their cause has been removed; and while I cannot help insisting that the repeated application of leeches in the treatment of uterine disease is very rarely necessary, I cannot help also declaring that I have known many cases in which the health of the patient has been seriously impaired, and life even compromised, by such treatment.

Any practitioner who has seen much of uterine disease may verify what I have said in regard to ulceration *within the womb*, by what he observes through the speculum in those cases where the ulceration is on the *vaginal portion of the os externum*. A patient with an anxious, weary expression of countenance, and complaining of the ordinary local and general symptoms of leucorrhœa from ulceration, comes to consult us. On examination, we find the expected ulceration or abrasion, and some congestion. We apply the solid nitrate from time to time till the ulcer cica-

trizes. We do not deplete nor mercurialize—in short, we do not weaken the patient. She recovers her health, her anxious expression vanishes, and in course of no long time she becomes pregnant. This, which we *do see*, as occurring at the *os externum*, occurs still more frequently at the *os internum*, where we *cannot see* it, and precisely the same treatment is applicable to the one as to the other, with this addition, that before we can apply the nitrate of silver in the latter case we must dilate, and with this difference, that while the former or external species of ulceration almost invariably occurs in those who have had one or more children, the latter or internal, almost as invariably is found in virgins and in those who have had none.

The following is one of many illustrating this form of the disease:—

Mrs. A—— has been married for nine months, when she had what was supposed to be a miscarriage; but from the menstruation, though for several months very scanty, having never been entirely suspended, and from a minute examination of the os and cervix uteri, I was quite satisfied that she had never been pregnant. When she first consulted me, she believed herself again at about the end of the third month of pregnancy; and as I was unwilling to incur the charge of having induced abortion, I contented myself with making a superficial examination, and waiting till time should put it beyond question one way or the other. She had however been regularly, though very scantly, menstruating, and though after a time she increased in size, and her mammæ (*not* the areola) enlarged and she had morning sickness, and many other of the signs and symptoms of pregnancy, I was quite confident that she was not pregnant. Still, she and her friends deprecated interference, and she went on until she reached the (supposed) seventh month. At this time I was desirous to begin the treatment that I thought likely to remove both the disease and the sterility, and requested the opinion of a professional friend, who agreed with me as to the non-pregnancy. I then examined with a bougie, and found marked constriction at the os internum, and *very acute pain*, produced by the passage of the bougie—pain described as being similar to that produced by the extrusion of a small clot of blood during the menstrual period. The leucorrhœa was intra-uterine, and in considerable quantity about midway between the two periods.

The treatment (local) consisted in dilatation of the passage as far as the cavity of the body of the womb; and in affecting this, I remarked what is, I believe very common in such cases, that after passing the constriction at the internal os the bougie reaches a cavity of much larger dimensions than natural, in which it can be moved about with freedom, and yet containing no polypus or tumour, and with its walls slightly increased in thickness, as if the effort to expel the clots at the menstrual period through the narrow neck had given rise to this form of hypertrophy with

dilatation, as is seen in the case of the heart. The dilatation was followed by the application of the solid nitrate of silver to the diseased part, and this was repeated till all tenderness was gone. Complete relief from pain during the menstrual period was the consequence, and ultimately the patient became pregnant. She has since her delivery (which took place at the full time) enjoyed perfect health.

It were easy to detail many such cases, but they are all more or less alike.

III. Another cause of sterility is a diseased state of the lining membrane of the cavity of the uterus, not necessarily (though not unfrequently) accompanied by the constricted and ulcerated state of the cervix referred to in the preceding section.

The chief symptom of this is the persistent continuance of uterine leucorrhœa in very considerable quantity, attended by the usual weakness, discomfort, irritability, and despondency, observed in most affections of the womb. The patient feels better at, and immediately before and after, the menstrual period, but feels all her ills heavy on her in the intermediate time.

In these cases the whole or greater part of the lining membrane of the womb is diseased. It is quite possible that the seminal fluid may pass into the womb, so as to come in contact with the ovum on its way from the ovary; but it is probable that the ovum (impregnated) when it reaches the womb does not find a healthy point of contact, and that therefore it passes through and perishes. In short, there is frequent impregnation, and as frequent destruction of the ovum. The object in view, therefore, is to restore a healthy state of the mucous membrane, and thus at the same time remove the disease and the sterility. The process of treatment is similar to that for the previous class of cases, with this difference, that the cavity of the body of the womb requires to be cauterized. This should be done at the end of the first week after the menstrual period, and repeated once a month till a healthy state and action are induced.

It is possible that the treatment of this class of cases may be conducted on different principles with success; but to me the plan mentioned seems the most simple, direct and successful, and it has this great recommendation, that it is quite as safe to apply the caustic to the inside as to the outside of the womb. I have said nothing of the general treatment; but though very important, there is nothing in it very different from what has been long and is every day pursued.

Mrs. M—— had been married for several years, and had enjoyed good health till her marriage. From that event she dated her complaints, all of which pointed to the uterine system. In this case the prominent symptom was the uterine leucorrhœa between the menstrual periods, commencing a few days after the disappearance of the menstrual fluid, and continuing generally for ten days. She was comparatively well just before and after the menses,

but when the white discharge appeared, she *felt* there was something wrong,—something that weakened and reduced her; and though she had undergone treatment of various kinds for it, the disease still persisted. On examination I could detect lateral displacement of the uterus, but no constriction. The body of the womb, however, was tender to the touch, and the bougie, when fully introduced, occasioned unusual pain. It appeared to me that the disease in this case lay in the cavity of the body; that the lining membrane was affected over a considerable surface; and that the treatment should consist in very free and repeated cauterization of the whole mucous membrane. Having dilated the cervix with a sponge tent, I did so, and with a very gratifying result.—The body of the womb became gradually less tender, the leucorrhœal discharge diminished, and lost its muco-purulent character; the vagina, which was tender from the acrid character of the discharge, became smooth and soft; the back lost its weakness; the general health became restored; and ultimately pregnancy supervened, with a favorable result.

In conclusion, I may add, that in connexion with this mode of treatment, there is a class of miscarriages in which this cauterization of the internal surface of the uterus is very successful—I mean, those in which an abortion has occurred between the second and third month, followed by general weakness, from which the patient does not recover, and the other uterine symptoms already detailed, and where a second pregnancy seems impossible. In these cases, examination with the uterine bougie generally communicates the feeling of its coming in contact with a rough, somewhat hard, uneven surface.—[*London Lancet.*

Result of Six Cases of Intermittent Fever treated by Nitric Acid. (under care of Prof. S. G. Armor.) Reported by R. L. Rea, M.D., Resident Physician.

The interest manifested in the success of nitric acid as an antiperiodic in the treatment of intermittent fever, has recently attracted much attention, and a confidence has been expressed in its therapeutic power, from sources which ought to be regarded as reliable, which will doubtless lead many to test the remedy. In order that others may be benefitted by the experience in the use of the remedy in the Hospital, I submit the following cases, which I condense from the Hospital Reports. They possess no peculiar interest further than as showing what reliance may be placed in nitric acid as an *antiperiodic*. We were careful, therefore, in selecting, as far as possible, uncomplicated cases, and such as were not likely to be prejudiced by the temporary omission of quinine, and as such, even in a *negative* point of view, may be of interest to the profession.

Case 1st. Thomas B——, æt. 34, laborer, was admitted April 12. Was attacked with intermittent fever in July last, of the quotidian type, which

has continued, with occasional interruptions of a week or two, until now; has had a paroxysm every day for two weeks past.

Present Condition.—Skin sallow, pulse 80, appetite good, bowels costive, sleeps well, tongue pale and moist, no evident enlargement of liver or spleen, no nausea or thirst.

℞. Ol. Ricini ℥j.; Ol. Terebinth. ʒj. m. sig. now.

13th. Bowels moved twice from medicine; discharges natural. Had chill yesterday at 4 p. m., followed by free vomiting.

℞. Nit. acid gtt. v.; Aqua dist. q. s. m. sig. every 5 hrs.

16th. Has had a chill every day since last note, under the continued use of the remedy, but the paroxysms are growing much lighter.

17th. Had no chill yesterday. Cont. med.

18th. Had a very slight chill yesterday. Cont. med. From this time until the 26th, the paroxysms continued to recur every second day, notwithstanding the persevering use of the remedy.

℞. Fowler's solution ars. gtt. x., ter die.

He had but a single recurrence after commencing this prescription, and was discharged May 9th.

Case 2d. Patrick B——, brother of case 1st, æt. 32, laborer; sanguineous temperament; was admitted April 12. Has had intermittent fever since 1st of July last, of the tertian type. Has had the paroxysms arrested several times with quinine, but has had them every day for a week past.

Present Condition.—Pulse 108, compressible, skin hot and dry, tongue natural, abdomen tympanitic, and tender over epigastric region, very thirsty, appetite good, spleen somewhat enlarged and tender upon pressure, bowels regular, has slight cough, but no characteristic *Physical Signs;* no pain in chest.

℞. Calomel, Rhei. pulv., Dover pulv., aa grs. v. now. Follow in six hours by ℞. Ol. Ricini ℥j.

13th. Bowels moved four times, discharges consistent and bilious, cough still slight and dry, appetite good, epigastric region remains tender; mustard applied to epigastrium.

℞. Nit. acid, gtt. v.; Aqua dist. q. s. m. sig. every 4 hrs.

14th. Had chills yesterday. Cont. med.

15th. Had no chill yesterday, cough ceased. Cont. med.

This patient had no return of the paroxysms, and was discharged 23rd of April.

Case 3d. William W——, æt. 22, laborer; bilio-nervous temperament, was admitted April 25. Had intermittent fever two months last fall; paroxysms assumed the tertian type two weeks ago, and have recurred regularly since.

Present Condition.—Tongue natural, appetite variable; bowels irregular in action, sometimes constipation and sometimes diarrhœa; pulse natural, sleeps well, eyes icterous, slight enlargement over region of liver.

℞. Ipecac. pulv. grs. ij.; Ant. tart. grs. ii. m. divide into four powders. Sig. one every 15 minutes until vomiting is induced.

26th. Emetic acted freely; acted also on the bowels; no chill yesterday.

℞. Nit. acid, gtt. v.; Aq. dist. q. s. m. sig. every 4 hrs.

℞. Pil. Hyd., grs. v. at bed time.

27th. No chill yesterday; general condition good; some appetite, no thirst.

May 3d. Had a return of chill to-day.

℞. Sul. quinine, grs. v. sig. every 4 hours.

4th. No return of paroxysm; the patient was discharged 14th.

Case 4th. Joseph R——, æt. 26, laborer; bilio-lymphatic temperament. Was admitted April 25; has had intermittent fever for 9 months, been occasionally free from it for 2 or 3 weeks.

Present Condition.—Tongue coated yellow, moist; appetite good, pulse 100, thirsty, urine free and natural in color, bowels regular, no perceptible derangement of the abdominal viscera.

℞. Nit. acid, gtt. v.; Aqua dist. q. s. m. sig. every 4 hours.

26th. Bowels moved; had chills to-day. Cont. med.

28th to May 5th. Had a chill every day, followed by fever, notwithstanding the remedy was administered regularly, and the dose gradually increased. He was then treated with Fowler's solut. ars., which interrupted the paroxysms, and he was discharged May 19th.

Case 5th. John R——, æt. 46, laborer; was admitted March 27. Has had intermittent fever of quotidian type for nine days.

Present Condition.—Extremeties edematous and painful, languid capillary circulation, pulse 84, rather weak, tongue coated dark yellow, bowels regular; no manifest enlargement of the liver or spleen; has some headache; has had no medical attention.

℞. Pill hydr. grs. ij.; Pulv. ipecac. grs. ss. fiat mas. sig. every 3 hours.

28th. Had chill to-day; bowels moved twice.

℞. Nit. acid, gtt. jv.; Aqua dist. q. s. m. sig. every 3 hours.

30th. No chill since last note; bowels not moved for two days.

℞. Cast. oil ℥j.; Spts turp. ℥ss.

31st. Bowels moved freely; pulse, tongue and skin natural, some appetite. Cont. acid.

April 4th. Had a return of chill this morning; bowels moved four times in 24 hours; feels quite weak.

Sul. quin. grs. ij.; Pulv. Doveri. grs. j. m. sig. every 2 hours.

This promptly arrested the paroxysm, and he continued to improve until 11th of April, when he was discharged, cured.

Case 6th. Charles Z——, æt. 19, shoemaker; sanguineo-nervous temperament; was admitted March 20; has been sick 14 days. Was attacked with ague, which has continued uninterruptedly until this time. His paroxysms occur about midnight, *every* night. About five days ago his chill, instead of passing off with fever and sweating, was followed by 5 or 6 copious liquid discharges from the bowels, and but slight fever.

Present Condition.—Lower extremities edematous and slightly discolored; urine free and high colored, tongue broad, clean and moist, bowels tender but not tympanitic; pulse 92, full, soft; no appetite, sleeps well, no enlargement of liver or spleen.

℞. Sul. quinine grs. ij.; Pulv. Dover grs. iij. m. every 2 hours.

21st. Had a chill last night, followed by four discharges; has fever, pulse 132, strong; tongue coated dark, head feels full and heavy, cheeks flushed.

Cont. med., commencing at 4 o'clock p. m., alternating with neutral mixture, combined with vin. ipecac.

22d. Had a chill last night, but no diarrhœa; considerable fever this morning, tongue cleaner, no appetite.

Nit. acid gtts. v. every five hours, in sufficient water to be pleasantly acid.

23d. Had no chill last night; bowels moved five times in 24 hours, nose bled freely, pulse 96, strong; tongue clean and moist; some heat of skin; has headache.

℞. Cont. med., with the addition of ¼ gr. morphine at bed time.

25th. Convalescent; has had no chills since 21st; diarrhœa ceased.

April 10. This patient has had no return of paroxysm since the commencement of the use of the nit. acid. He was attacked, however, at the date of last note, with inflammation of the lymphatics of right leg, for which he is now under treatment in the surgical ward.

May 10. This patient had return of chills to-day; he is still in surgical ward.

It will be seen by the report of the above cases, which are very briefly given, that the treatment by nitric acid was not followed by that success which has been recently claimed for it by its advocates. We selected the cases from a large number in the Hospital, as affording the best test of its therapeutic power, and with the earnest hope that we might be able to verify the experience of others, but careful observation of its effects at the bedside has disappointed these hopes. In some combination, however, nitric acid is largely used in the Hospital as a mild and pleasant tonic during the period of convalescence of the intermittent and remittent forms of fever, and especially in those cases in which there is evident hepatic torpor, and in which, from general anæmia, constitutional debility, or other causes, mercury is contra-indicated; but as a reliable *anti-periodic* our observation, thus far, has led us to distrust its powers.—[*Western Lancet.*

On the Diagnosis of Tumors within the Cranium.

Dr. Freidereich has recently published a very interesting monograph on this subject, containing the particulars of 45 cases of intracranial tumors, 11 of which were observed by himself; and on these he has founded some valuable remarks as to the mode of diagnosis. The following is a brief resume of his observations on these points. He considers,

1st. *The General Effects of Intracranial Tumors.*—Various derangements of sensibility occur. One of the most constant of these is *headache*, which is especially frequent in the early stages of the disease. The cephalalgia is remarkable for its persistence and intensity; it may be either continuous or intermittent, and it may be accompanied by *vertigo* and *vomiting*. Its site does not always indicate the place of the new growth. The organs of special sense may be affected; the *sight* becomes impaired on one or both sides; there may be *strabismus;* and the *hearing* generally suffers more or less. The minor grades of *paralysis* are common. The length of the interval between the initiatory headache, and the occurrence of the paralysis, constitute the most characteristic mark of

these intracranial tumors. *Convulsions* and *Spasmodic Conditions* occur in one half of all cases, and the former often assume an epileptic type. The *mind* is always more or less affected; its diseased condition generally commencing with *loss of memory*. All these symptoms are very inconstant and variable; they are also liable to alternate remissions and exacerbations, which probably are due to the occurrence of transitory congestions either of the tumor or the cerebral substance, or perhaps of both together. The course of intracranial tumors is always chronic. Freidreich never knew a case to be shorter in duration than 6 weeks, or longer than 14 years.

2d. *The Special or Differential Diagnosis of Intracranial Tumors.* (*a*) Those situated in the *cerebral hemispheres* (18) are generally accompanied by obstinate headache (14); nausea and vomiting (9); derangements of the motory functions (14); consisting of more or less extensive paralysis, and of convulsions which assume an epileptiform character. When hemiplegia occurs it is sometimes crossed (*gekreuzt*) and sometimes not; but it constantly occurs on the affected side. Derangements of the special senses are common (10), especially of sight (7); and intelligence is often impaired (11). In a few excepted cases there are no headache or alterations of the motor functions.

(*d*) *Tumors of the base of the cranium in the neighborhood of the pons*, occasion the following symptoms:—(9) headache, (8) almost always frontal; impairment of vision (7), commonly also of hearing and taste (5), and in some cases (3) of smell. All these symptoms, due to loss of power of the facial nerves, occur on the same side as the tumor; but paralysis of the extremities, when it occurs, affects the opposite side of the body. *Complete* hemiplegia and paraplegia are not very common; and convulsions occur less frequently than with the former class of tumors, and are not epileptiform. An important sign of these tumors is afforded by the great multiplicity of the existing sensorial disturbances, and the tendency of the optical derangement to become bilateral. The mind is sometimes affected (5).

(d) *Tumors of the Pituitary Region.*—Freidreich only saw 1 case of this. There was frequent frontal headache, often with pain in the orbit, and double amaurosis. There is rarely any disturbance of the motor functions.

4th. *Tumors of the Anterior part of the Base of the Brain.*—Two cases were examined. The symptoms resemble those just mentioned.

5th. *Tumors of the Peduncles of the Cerebrum and Cerebellum.*—Paralysis of the face and extremities, occurring on the side opposite to that on which the tumor was situated, was observed in 3 cases. This makes tumors thus situated resemble those of the hemispheres. Complicated derangements of the nerves of special sense and of the face (as the oculo-motor and trifacial), were seen in two cases. This, on the other hand, approximates these tumors to those of the base.

(*f.*) *Tumors of the Cerebellum* (8) had the following signs:—violent cephalalgia (7); often intermittent, and combined with vomiting (4); and situated in the occipital region (4.) *Occipital* headache may be considered to be pathognomonic here, as it occurs in the case of no other intracranial tumors. Pain at the nape of the neck, increased by pressure, may exist. In one case there were no peculiar symptoms; and in none of the cases of tumors of the cerebellum were the generative functions at all affected.

(*g.*) *Tumors of complex situation.*—Correct diagnosis is here impossible.—[*Edinburgh Monthly Journal.*

On the immediate cause of Coma and Insensibility. By Dr. Snow.

In Dr. Snow's opinion, coma and insensibility, though met with under a variety of circumstances, are always caused by the interruption of the process of oxidation of the brain and nerves, which process is necessary to consciousness, sensibility, and all the other animal functions. The effect of respiration, which is a process of oxidation, is very evident on the fœtus, the moment it begins to breathe the air, in exchange for the imperfect oxygenation of the blood previously effected through the placenta. In asphyxia, the privation of oxygen causes coma and insensibility, whilst the heart still continues to beat for a time. Narcotics produce coma and insensibility by diminishing oxidation, through a counter-affinity which they possess for the oxygen. The following are the chief facts, which prove that narcotics act by diminishing oxidation in the system. The quantity of carbonic acid given off from the lungs is diminished during the influence of chloroform and ether. Bocker has found that the quantity of all the constituents of the urine was diminished by alcohol and some other narcotics. The temperature of the body, which always bears a direct relation to the consumption of oxygen in the system, is lowered during the insensibility caused by narcotics. Narcotics have most of them the power of preventing oxidation out of the body. Putrefaction is a process of oxidation in its commencement: and nearly all narcotics are antiseptics, their antiseptic power usually bearing a direct relation to their power as narcotics. The vapors of volatile narcotics also have the property of preventing that kind of oxidation which constitutes ordinary combustion. Some parts of the nervous system seem to have a greater affinity for oxygen than others, as they are able to perform their functions with a less amount of that gas. It is on this account that patients are able to exist in a state of coma and insensibility without dying. In privation of air, and also under the influence of narcotics, the functions of the cerebral hemispheres, and of the nerves of common sensation, are first suspended, coma and insensibility being induced, whilst the respiratory movements and the action of the heart continue. By further privation of air the respiratory movements ceased, from the functions of the medulla oblongata and the

nerves of respiration being suspended, whilst the heart continued to act; showing that the ganglionic system of nerves continue to perform their functions. Under the influence of narcotics, also, the action of the heart usually survived that of the muscles of respiration, when these agents were not very rapidly introduced into the circulation. The circulation of the blood is of course necessary to convey oxygen to any part of the body; and it is by the interruption of the circulation in the brain that the diminution of oxidation was produced which caused the coma of apoplexy and epilepsy. The symptoms of apoplexy arise sometimes from extreme congestion, and sometimes from anæmia of the brain, but in either case the circulation is much interrupted; whilst, in effusion, the yielding coats of the vessels were the first to feel the pressure.—[*Lancet.*

Effects of Position in the Treatment of certain Gastric and Enteric affections. By Dr. COALE.

At a meeting of the "Boston Society for Medical Improvement," Dr. Coale remarked, "that the late frequency of cholera morbus and other similar affections, had given him an opportunity of testing, to a considerable extent, the efficacy of a certain practice of his, based upon observation made some time since, but which he felt wanted confirmation before suggesting it generally. He is convinced, from actual experiment, that persons affected with irritability of the stomach are much less liable to vomit if they lie on the right side than when they recline in any other position—particularly on the left side. The explanation is evident. While lying on the right side, any contraction of the stomach need not much affect its solid contents; but, when lying on the left side, the contents are in the neighborhood of the cardiac orifice, and any contraction of the organ will force them more or less through this opening into the œsophagus; thus, the difference between the two cases will be a simple eructation in the first, and vomiting in the second. This, Dr. C. has now tested in very many cases; and by many experiments in some of them, varying the position to the increase or diminution of the nausea and vomiting. It may be urged in objection to the explanation, that a contraction of the stomach that would force the contents through the cardiac orifice, would produce vomiting at any rate. But the difference is this: the same amount of contraction which, when the patient lies on the right side, throws off gas merely, when he is on the other may force a small portion of solid or fluid matter into the œsophagus, when reflex action is at once excited, and the whole stomach stimulated into action.

"In treatment of cases of flatulence, and of what is commonly called 'cramp colic,' Dr. C. has found reclining on the right side beneficial. It lessens the vomiting—as first said—a frequent attendant in these cases; but, besides this, it gives a more ready

escape to gas contained in the transverse colon. For example, suppose the trouble is a spasm, confining gas in the transverse or ascending colon, were the patient on the left side, and a relaxation of the spasm to occur, the gas is still kept behind the affected spot, for the distended intestine is not liable to take upon itself sufficient action to expel it. But, if the patient be on the right side, the gas then ascends and passes on to an unaffected part of the intestine, by which its escape is facilitated."—[*American Quarterly Journal of Med. Science.*

A New Operation for Lacerated Perinæum. By M. JOBERT.

The peculiarity of this operation is in the suture. After having pared the edges of the wound, M. Jobert threads a broad lace lengthwise through them, and then drawing the lace, he puckers all the edges to a point, precisely as the mouth of a tobacco-pouch is closed by drawing the string. M. Jobert appears to have operated in this way in more than one instance.

CASE. Eliza Dorvilliers, æt. 23, staymaker. The labor, in which the perinæum gave way, was her first and only one; it occurred on April 5th, 1854. The child was dead. Except so far as concerned the wretchedness of the local accident, her recovery was prompt and satisfactory.

She was admitted into the Hôpital de la Clinique, under M. Jobert, on the 25th of August, 1854. At this time her general health was pretty good. Three days previously she had menstruated for the first time since her confinement. She had no power of retaining flatus, or fæces, if at all fluid. The perinæum is completely lacerated, and the recto-vaginal septum is torn to a certain extent (about 3 centimetres). The lacerated edges are retracted and cicatrized. The neighboring skin is red and somewhat tumefied.

Having prepared the patient by several baths and a purgative enema, administered the night before, M. Jobert proceeded to operate on the 1st of September.

Having placed the patient in a position for lithotomy, the edges of the wound were pared. This took considerable time, and it was attended with much hemorrhage. Then three threads were taken and introduced in succession, the one through the length of the upper border of the wound, the second through one side of the lacerated perinæum, and the third through the other side. After this, these threads were drawn tight and tied in a double knot. Last of all, incisions were made on each side, to take off the tension.

The case progressed favorably without any remarkable event. On the 6th, the threads were removed, and union appeared complete. On the 8th, there having been no motion up to this time, several unwise efforts were made at the close-stool, but without any ill consequences. On the 15th, a careful examination was made, when there was found to be a minute fistulous communica-

tion between the vagina and rectum. This was touched with a point of lunar caustic. On the 24th, this opening was completely closed, and the patient had recovered complete power over the bowel. The perinæum is about 3 centimetres broad, and appears to be very solid. On the 26th October, she left the hospital quite well.—[*Gaz. Hebd. de Méd. Ranking's Abstract.*

On the Treatment of the Inflamed Breasts of Nurses. By M. Reitzenbeck, of Prague.

The method here recommended is so simple, that no one need hesitate to adopt it, provided he is called in before the mischief has reached a certain degree of development.

It is well known that engorgements of the mammary glands are frequently caused by chapped nipple. The inflammation of the skin extends directly into the ducts, exudations take place by which some of these ducts are plugged up, the milk is pent in, and hence the engorgement. If now, in such a case, the breast be surrounded with the hands, and pressure made in the direction of the nipple, a thin, transparent, whitish vesicle, is caused, by the milk accumulating behind the closed orifices of the ducts. It is necessary then, to do this, and having done it, the next thing is to prick the vesicle with a needle, to remove any epithelial scales which may be present, and to apply the infant. If time has not been lost unnecessarily, the relief is almost immediate, and pain and tumefaction disappear in a few minutes; but even when it is otherwise the relief is very marked, and by repeating the process a few times, the sufferer is relieved altogether.—[*Gaz. Médicale de Paris,* and *Ibid.*

Wounds of the Heart.

Samuel S. Purple, M. D., senior editor of the New York Journal of Medicine, in the May (1855) No. of that Journal, deduces from his "Statistical Observations on Wounds of the Heart, and on their relation to Forensic Medicine, with a table of forty-two recorded cases," the conclusions which follows:—

That wounds of the heart are not in general immediately fatal.

That recovery, after severe gun-shot, incised and punctured wounds of the heart is possible, and that too, amounting almost to a probability, provided a careful and judicious treatment is faithfully carried out.

That the presence of a leaden ball imbedded in the walls of a ventricle of the heart does not preclude the possibility of recovery, and is not incompatible with the continuance of life for a number of years.

That it is possible for an incised wound of the heart to heal by

the first intention, and the patient afterwards be able to continue a laborious occupation for years after with no severe manifestations of heart disease.

That the presence of a foreign body, other than a leaden ball, of considerable size in the walls or cavity of the heart, does not necessarily preclude the possibility of a continuance of life for a number of years.

That the prognosis of all wounds of the heart is unfavorable, but that in some cases hopes of recovery may be entertained, provided the patient's constitution be good, and efficient treatment be early resorted to.

That the proper treatment of wounds of the heart is that which is adapted to like wounds of the chest in general; and that the inflammatory complications must be met with the same remedies as are adapted to the management of the disease when arising from idiopathic causes.

That all parts of the heart are not equally liable to wounds, the right ventricle being the one most frequently injured.

That the comparative mortality of heart wounds shows that the average duration of life is greater if the left ventricle be the seat of injury. This proposition is opposed to the received opinion of almost all writers on this subject.

That the medico-legal relations of wounds of the heart are important, and should command the surgeon's careful attention, in order that he may not jeopard the life of his patient by timidity on the one hand or temerity on the other.—[*New Orleans Medical and Surgical Journal.*

Lactic Acid in Dyspepsia. By Dr. C. HANDFIELD JONES, Assistant Physician to St. Mary's Hospital.

Dr. C. Handfield Jones advises the use of lactic acid in dyspepsia. He has chiefly given it in cases of irritative dyspepsia, where the digestion was painful and imperfect, and had been so for some time; he does not advise its use at the commencement of the treatment in a severe case, but only after irritation and vascular erethism is somewhat reduced. It should be employed in doses of fifteen or twenty minims, in a half-ounce of water, and taken *at* meal times; he states that it seems to mingle with the food, and to supply one of the constituents of healthy gastric juice, which is probably imperfectly produced. Its use need not be confined to cases of dyspepsia, but may be extended to all cases where it is desirable to improve the tone and power of the stomach. It is pleasant, occupies but little space, and the only objection to its use is its present high price; but if much employed, it could probably be obtained cheaply.—[*Assoc. Med. Journal.*

EDITORIAL AND MISCELLANEOUS.

BIBLIOGRAPHICAL.

Clinical Lectures on Paralysis, Disease of the Brain, and other Affections of the Nervous System. By Robert Bentley Todd, M. D., F. R. S., &c. Lindsay & Blakiston. Philad. 1855.

The work before us comprises a series of lectures delivered at King's College Hospital during the last ten years. It is not intended as a systematic course, but merely lectures delivered upon such cases as presented themselves to the author during this period. It is a work of much merit, and will be read with deep interest by those of the profession who wish to acquire a knowledge of the diseases of the nervous system.

Letters to a Young Physician just entering upon Practice. By James Jackson, M. D., LL. D. Phillips, Sampson & Co., Boston. J. C. Derby, New York. 1855.

These Letters will be read with advantage not only by those just entering upon the duties of the Profession, but by many in whom the novelty of the thing has long since worn off. The second letter contains some advice as to the conduct of a physician in the sick room, which it would be well to bear in mind.

Atlanta Medical Journals and College.—We have received the first number of the "Atlanta Medical and Surgical Journal," edited by Drs. Logan and Westmoreland, and also the first number of "Fleming's Hygienic Journal," edited by Dr. Newton R. Fleming. These periodicals are both to be published monthly, the former at $3 per annum, and the latter at $2 per annum. Their first appearance is highly creditable to the enterprising conductors, and they will doubtless add considerably to the reputation of Southern medical literature. That the multiplication of periodicals has the effect of increasing the number of writers cannot be denied, and many young men who may be thus induced to venture a contribution will be emboldened to renewed efforts, and ultimately become eminently useful. With three medical monthlies now in Georgia alone, there can certainly be no excuse with the Profession at the South for keeping back any interesting facts or reflections.

The Atlanta Medical College has recently closed its first session, having had a respectable class of seventy-eight students. The trial of a summer session has therefore proved to be quite a successful experiment. Its Faculty deserve much credit for their laudable zeal, and have every reason to be gratified at the result of their efforts.

Oglethorpe Medical College.—We perceive by the newspapers that another medical college has been organized in Savannah, bearing the above

name, and that its first session will be commenced on the first day of November next. The Faculty is constituted as follows:

H. L. Byrd, M. D., (late of Savannah Medical College,) Professor of the Principles and Practice of Physic.
E. LeRoy Antony, M. D., (of Waynesboro', Ga.,) Professor of Obstetrics and Diseases of Women and Children.
Wesley C. Norwood, M. D., (of Cokesbury, S. C.,) Professor of Materia Medica and Medical Jurisprudence.
James S. Morel, M. D., (of Savannah, Ga.,) Professor of Anatomy.
John Davis, M. D., (of Abbeville, S. C.,) Professor of Physiology.
Wm. T. Feay, M. D., (of Savannah, Ga.,) Professor of Chemistry and Pharmacy.
Charles Ganahl, M. D., (of Savannah, Ga.,) Professor pro. tem. of the Principles and Practice of Surgery.
Demonstrator of Anatomy, R. J. Nunn, M. D., (of Savannah.)

The fees will be—$105 for the entire Course of Lectures; $10 Demonstrator's fee; Graduation $30; Matriculation $5.

This makes the fourth Medical College chartered by the State of Georgia, besides the Botanic or Eclectic school located at Macon. Surely no one should be allowed now to practice medicine in Georgia without a diploma!

The Alumni of the Medical College of Georgia.—The Medical College of Georgia, at Augusta, has good reason to be proud of its Alumni. They have proved themselves excellent practitioners throughout the Southern States, and ably sustain the reputation of their alma mater as Professors in the several Institutions more recently organized in Savannah and Atlanta. We find two of her Alumni in the Savannah Medical College, one in the Oglethorpe Medical College, and four in the Atlanta Medical College. Success to them in whatever sphere they may move.

Transactions of the Medical Association of the State of Alabama.—We have received the eighth annual issue of the above work, and find it full of valuable matter, some of which we hope to be able to present to our readers. Alabama may compare very favorably with her sister states in point of medical talent and industry. We regret to find in the midst of such interesting contributions to science, the unworthy reflections cast upon Southern Medical Colleges, contained in the "annual oration." The speaker, in advocating the establishment of a Medical school in Mobile, uses the following language:

"Many of our southern states already have medical schools in existence, and it is natural that they should, for a time at least, look with a 'jealous eye' on any new rival; but such sentiments will soon pass by and give place to liberal feelings and noble emulation.

"The palm of medical teaching in the South is vascilating: it does not appear to be centering to any particular point. Kentucky cannot settle it,

for the University at Louisville is on the wane, and the radiance of Transylvania lies in the past; Tennessee cannot stay it, for Nashville does not seem to be so happy a location as some others for maintaining a large public school, while Memphis has never claimed more than ordinary facilities for medical education. New Orleans is objectionable in consequence of the epidemics which so often scourge that otherwise favored city. The schools of Virginia and Maryland have not been successful, and are in little favor with southern students: the Augusta medical college is entirely defunct, while the Charleston school is never crowded with numbers."

Such a statement scarcely needs comment, for every one knows that most of the institutions alluded to are in a highly prosperous condition, and most deservedly so. Even the one whose obituary is thus pronounced had a bona fide class of one hundred and seventy-one students at its session last winter, and is as well provided with every thing necessary to a most thorough medical education as any in the Union. It is not surprising that one who would so far forget the known facts of history as to hail Dante as "that great *Spanish* author," should be equally regardless of accuracy in other matters.

Correction.—We are requested to correct a typographical error occurring in the circular of the Medical College of Georgia, appended to the August number of this Journal. On the fourth line from the bottom of the 7th page of the circular, instead of "none but" read *more than.*

Remarks on the Preparation of Skeletons.—By Charles Bell, M. D. It is often convenient and economical for students to be able to prepare skeletons, for themselves, out of the remains of subjects used in dissection. With a few hints about the mode of procedure, and by the exercise of a little care and patience, any tolerably good dissector may make for himself, as good a skeleton as would cost him half a year's tuition, if bought of the janitors of any of our medical schools, besides gaining a skill in manipulation, that will be always useful.

To separate the bones of a subject, so as to study their forms and relations, and afterwards re-adjust them in their places, by mounting the skeleton, different modes are adopted. A subject who has died of some lingering disease, such as phthisis or dropsy, should be selected in preference, as in them the greasy marrow of the bones will be found nearly all absorbed. and its place supplied merely by a sort of serum. In skeletons prepared from fleshy subjects, it is almost impossible to get rid of the oil so completely, that it will not be continually frying out, when the bones are exposed to any degree of warmth, thus soiling and disfiguring the preparation, besides giving it a disagreeable odour. After the muscles have been removed by coarse dissection, taking care, however, not to cut the articulating surfaces, of other parts of the bones, the whole should be boiled in water, for some hours, to remove the soft parts which remain attached. Pains should be taken, in the process of cleaning and boiling, not to lose sight of certain small bones, which might readily pass unnoticed, such as the sesamoid bones, the little ossicles of the ear, the extreme bones of the phalanges, &c. After the boiling, they should be well cleaned, by gently

scraping them with a dull knife, by which the remaining shreds of flesh are easily detached; and then exposed, for several months, in a safe place, to the action of the sun, rain and dew. To accelerate their bleaching, they may be frequently sprinkled with water, and turned over. Too strong a solar heat, however, during the summer, alters their gelatinous constituents, and causes the bones to become dry and chalky, and frequently to crack. After the completion of this whitening process, the bones will be fit for mounting.

A better mode than the above, and the one now generally adopted for all the nicer preparations of bones, is by *maceration*. For this purpose, the bones denuded of their flesh, are steeped four or five days in fresh water, which should cover them over completely to some depth, so that the blood in them may be removed. In winter, warm water should be employed, and the maceration carried on in a warm room; in summer, water at the ordinary temperature will suffice. At the end of that time, the flesh will have become very pale and white. The water is now to be changed, and the process continued. After the soft parts have become completely decomposed, which will take several weeks, the bones must be taken out, scraped with a dull knife, washed, and returned into another tub of fresh, luke-warm water, in which they should remain for some days, to remove any bad smell, that the decomposing flesh may have left upon them. It is well to change the water, in which they are macerating, quite often, as although this retards the decay of the flesh, it renders the bones whiter, and removes the stench. Lastly, the oily matter is to be removed, by soaking them for a while in weak ley. If not sufficiently white, they may then be bleached, by exposure to the sun and wet. It is a bad plan to use chloride of lime to whiten them, as it acts upon the bone, and renders it rough and porous. The whole should finally be varnished over with the white of eggs, and carefully dried.

It may be well to remark that care should be taken not to use ditch water, or water that has been collected from the roof of a house, for purposes of maceration, as the well-knowu green confervoid matter will be developed in it, and stain the bones. The water in the tub should never be allowed to evaporate to such a degree as to expose any part of its contents, as exposure to the air occasions a brownish stain, which is very difficult to be got rid of.

As the cartilages become disturbed, when maceration is carried too far, it is a good plan to prevent this, by removing the bones which support them, and cleaning them before the rest. As this is very liable to occur in the costal cartilage, they are usually separated, at first, from the ribs, leaving them joined to the sternum, so as to prepare them together.

If a disarticulated *head* is wanted, a specimen must be selected, which has not quite reached adult age. To separate these bones, which interlace upon all sides, dried peas are often employed. The skull, having been closely filled with these, from the *foramen magnum*, is laid in water, when the peas, swelling out upon all sides, with a gradual but powerful pressure, at length affect the disjunction of the bones. Sometimes, however, fractures are the result of this experiment, as the peas swell out in a few hours, while the bones softening but slowly, are broken, before they have acquired sufficient elasticity to give way. It is well, therefore, to soak the skull for some days in water, before putting in the peas, so that the bones may become slightly flexible.

Horizontal and vertical sections of the cranium are extremely instructive, and may be made with a fine saw, care being taken, in the vertical division, not to go too near the mesial line, for fear of destroying the azygos bone or vomer.—[*New Hampshire Journ. of Med.*

Preventing Fats and Oil from becoming Rancid.—Dr. C. W. Wright, of Cincinnati, in the Western Lancet, says that by imitating the practice of the Indians in mixing the bark of the elm-tree (ulmus fulva) with fats, fixed oils, butter, &c., they are preserved from rancidity, and have, moreover, communicated to them an odor resembling the kernel of the hickory-nut. About a drachm of the bark, either in the fresh or dried state, to a pound of these articles, is the proportion to be used. This surely deserves a fair trial, and the principle may be extended, as the Doctor remarks, to cerates, ointments, oils for machinery &c.—[*Nashville Journ. Med.*

Ointment for Hemorrhoids.—Guy's Hospital gives us the following ointment for piles, which happily combines the astringent properties of lead and galls, with the anodyne influence of opium. A good formula of this sort will be useful to the country practitioner, who will frequently be consulted with regard to this very common disease. ℞. *Gallarum. contrit.*, ʒij.; *Opii* (*emolliti aquæ cum*, ʒj.) ʒss.; *Lig. plumbi. diacet.*, ʒij.; *Adipis*, ℥j. *ft. ung.*—[*Virginia Med. & Surg. Journ.*

Tic Douloureaux.—Dr. Chisholm speaks in the highest terms of the benefits to be derived from the use of the ointment of veratria in neuralgia. He directs that it should be used in the proportion of fifteen and twenty grains to the ounce, and rubbed in until tingling and a peculiar pricking sensation is felt.—[*Virginia Med. and Surg. Jour.*

Who introduced Cod Liver Oil?—In the Association Medical Journal of Great Britain, the question is agitated to who are we indebted for the first use of Cod Liver Oil. It seems to have early been recommended by the *Manchester* physicians, Drs. *Percival*, *Hay.* and *Bardsley*, under the name of the *oleum jecoris aselli.* It was consumed there soon after its introduction in 1776, in quantities of fifty to sixty gallons annually.—[*Journal of Med. and Surg.*

ERRATA.—In the part of Dr. BOLING's Paper on Phosphorus, published in our September No., the reader will please notice the following corrections:

On page 520, line 4, for "accumulation," read, acceleration.
" 521, " 24, " "no little," read, so little.
" 521, " 26, " "influence," read, inference.
" 525, " 6, " "perhaps of all," read, perhaps all.
" 532, " 32. " "rarely," read, really, and for "giving," read, given.
" 533, " 35, " "position," read, proportion.
" 535, " 18, " "influence," read, inference.
" 536, " 1, " "influence," read, inference.
" 536, " 21, " "at least," read, at best.
" 539, " 7, " "doses," read, dose.
" 541, " 5, " "saturated," read, diluted.
" 542, " 22, " "facts," read, fact.

And in our present No., on page 596, line 20, for "begone," read, bryone.
" " " 21, " "au," read, ou.

SOUTHERN

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ORIGINAL AND ECLECTIC.

ARTICLE XXXIV.

"*On the Treatment of Strictures of the Urethra.*" By L. A. Dugas, M. D., &c., &c. (Published by request of the Medical Society of the State of Georgia.)

In order to be prepared for the study before us, it is proper that we direct our attention to the normal anatomy of the urethral canal, so far as this may be necessary to elucidate our subject. We need dwell neither upon the curvatures nor variable length of this canal, but merely recognize its usual subdivision into a spongy, a membranous and a prostatic portion, as calculated to facilitate and make our language more definite. It is worthy of notice, that these several portions of the canal present different diameters: thus, while the meatus and the beginning of the membranous portions are the most contracted points, the bulbous and central prostatic portions are those whose diameter is greatest. Indeed the whole length of the canal presents inequalities of diameter more or less marked at different points, so that its real transverse dimensions cannot be represented by any given measure. The dilatability of the urethra is also found to be unlike at different points. The researches of Reybard have demonstrated that the *meatus* may be dilated to twice its normal diameter, but that the *fossa navicularis*, just beyond the meatus, is much less yielding; that from this point to the suspensory ligament the canal is more dilatable; and that its most yielding portions are the bulbous, membranous, and prostatic, but especially the vesical meatus.

These peculiarities obtain at all ages, but the canal is more dilatable in the old than in the young. The same observer ascertained that when the forced dilatation was carried so far as to produce a rupture, this was found to exist alone in the mucous membrane; that the laceration was longitudinal and upon the inferior surface of the canal; and that the spongy tissue was susceptible of a still much greater degree of dilatation without being torn. The fissure thus produced in the mucous membrane would therefore be increased in width, according to the force of dilatation, leaving the spongy tissue uncovered to this extent. It is thus that the canal may be very considerably dilated after scarrifying the mucous membrane, without impairing the integrity of the other tissues.

The inner surface of the urethra is lined by a very thin mucous membrane, which, in the flaccid state of the penis, presents slight longitudinal wrinkles. Reybard denies ever having found the *transverse* wrinkles and valvular arrangements which are affirmed by some to offer an impediment to catheterism, even though the penis be pulled so as to efface them. He acknowledges, however, that the point of a very fine bougie may be arrested just beyond the fossa navicularis by the *hymenial valve* recently discovered there by M. Guerin. Near the vesical extremity of the urethra, the posterior or inferior face of the mucous membrane spreads out and presents on either side of the median line the orifices of the seminal and prostatic ducts, in front of which may also be seen those coming from the glands of Cowper. The lacunæ of Morgagni exist along the mucous surface, but in greater numbers about the bulb, and may sometimes arrest very small instruments.

Let us now examine the peculiarities of structure presented by the other constituents of the urethra in the spongy, the membranous, and the prostatic portions respectively.

The spongy portion of the urethra is that which extends from the meatus urinarius externus to the arch of the pubis, and it derives its name from the circumstance that the mucous membrane is here surrounded by a peculiar erectile structure denominated the corpus spongiosum urethra. This corpus spongiosum is contained between two laminæ of fibrous structure, the one upon its internal and the other upon its external surface, both of which, however, coalesce at their anterior and posterior extremities, and also along the groove formed by the lower junction of the corpora cavernosa, to which they adhere. We have here, therefore, a

closed fibrous sac, within which is confined the spongy or erectile tissue, which tissue, being more abundant at the anterior extremity, and overlapping the ends of the cavernous bodies, constitutes the glans penis. In like manner is the *bulb* of the urethra the result of an increased development of the spongy tissue in this portion. The matrix or sheath of the corpus spongiosum is then separated from the urethral mucous membrane by the *sub-mucous*, and from the skin by the sub-cutaneous cellular tissue. The bulb is much more developed in the adult than at an earlier age. (Vidal. *Méd. Opératoire*, Tom. 4, p. 488.) The contractility of the urethra is attributed to the existence of a stratum of circular muscular fibres in contact with the inner lamina of this sheath. According to some, the muscular fibres enter into the structure itself of the lamina, and are separated from the mucous membrane by a vascular net-work. The thickness of the urethral walls, in the spongy portion, is not uniform, but is greater inferiorly than laterally, and gradually increases as we approach the bulb, where it reaches its maximum. The dilatability of these walls is also in a direct ratio to their thickness, being therefore greater inferiorly than elsewhere. Hence the importance, in catheterism, of directing the point of the instrument towards the superior surface. The spongy body is supplied with blood from the internal pudic arteries, branches of which make their way into the bulb and terminate in the cells of the spongy tissue, from whence the veins originate, as may be demonstrated by fine injections which pass readily from either class of vessels into the other.

The *Membranous* portion of the urethra is that intervening between the bulb and the prostate; and its length is variously estimated at from 5 to 12 lines. "Its structure differs from that of the spongy portion. Externally to the mucous membrane we find a stratum of pale muscular fibres similar to those of the bladder, some of which are circular and others longitudinal. Still beyond these there exists a layer of fleshy fibres, red, numerous, and compact; these are the muscles of Wilson. The union of these tissues gives to this portion of the urethra such considerable thickness that it becomes the firmest of all, as has been remarked by Amussat, who properly designates it as the *muscular* portion. It is resistant and contractile; for which reason the fibres which surround it have received from the same anatomist the name of vesical sphincter." (Reybard. *Traité des Retrecissemens de l'Uretre*, p. 26.)

The *Prostatic portion* of the urethra is that which is imbedded in the prostate gland and communicates with the bladder. Its length necessarily varies according to age and the condition of the prostate. Hence this is stated to be from 6 to 16 lines. It has been found in some pathological conditions of the prostate to exceed its natural length by two inches; a fact which should be borne in mind. The same remarks are applicable to the *diameter* of this portion of the canal, which is, as already intimated, naturally greater here than elsewhere. The firmness or resistance of the walls of this portion of the canal must vary according to the state of the prostate which surrounds them.

Having as briefly as possible directed attention to such portions of the anatomical structure of the urethra as may have a bearing upon the subject before us, let us now advert to some of the pathological states observed in strictures of this canal.

The classification of strictures of the urethra varies according to the peculiar views of authors. Ducamp, after stating that they are always the product of inflammation, adds that "the mucous membrane of the urethra, irritated for a length of time, becomes thickened in one or more points, and terminates in induration." (p. 8.) He then studies the effects of this morbid action under the heads of Induration, Bands, and carnosities. Amussat says that they are organic, spasmodic, and inflammatory; that "the name of organic stricture is given to points of engorgement which are formed upon the mucous membrane of the urethra or in the tissues which surround it." And adds, that there are "four species of organic strictures: 1st, Frœni; 2d, valvular strictures; 3d, strictures produced by a chronic swelling of the mucous membrane; and 4th, callous strictures, which comprise the indurations and nodes found in the subjacent and spongy tissues." (Lectures, p. 17.) According to Prof. Gross, these strictures are "either transient or permanent." The former are spasmodic, and therefore paroxysmal; but in the latter form the stricture "is always caused by an effusion of plastic lymph into the lining membrane and the subjacent cellular tissue of the urethra, where a portion of this substance remains, and is ultimately organized, being thus incorporated as a constituent element with the pre-existing strictures." "Organic strictures" (he continues) "are divided into simple and complicated, common and traumatic, soft and callous, dilatable and undilatable, permeable and impermeable, recent and old." (p. 615.) Reybard remarks, that strictures of the urethra are of four kinds:

the spasmodic, the inflammatory, the organic. and those consequent upon the existence of intra or extra-urethral tumors. (p. 45.)

We consider all strictures of the urethra, organic lesions, whether appreciable or not by post-mortem inspection. Those termed spasmodic, depend upon a morbid sensibility of the tissues, which usually leaves no visible trace after death, although they may be attended with marked irritation or phlogosis during life. Indeed such reflex contractions indicate the existence of irritation at some point or other of the urinary apparatus, and cannot be supposed to occur without. The strictures dependent upon inflammation, in the ordinary acceptation of the term, and those attended with deposits of new matter in the walls of the urethra, may for the most part be readily detected after death, as they are also the most unmistakable during life. The study of these various modifications of organic lesion may, however, be perhaps facilitated by adopting the classification proposed by Reybard.

Spasmodic Strictures.—These are, as the term indicates, impediments offered to the flow of urine or to the passage of instruments by a contraction of the muscular fibres which enter into the structure of the urethral parietes; and, like all spasmodic affections, they must be more or less transitory, or paroxysmal. Theory alone would teach us, and observation confirms it, that such spasms must be provoked by irritation, more or less intense, at some point of the canal. As irritations of the mucous surface of the bladder, stomach, or intestines, will induce contractions of the muscular coat of these organs, so will the same cause excite similar action in the urethra. Yet, the degree of irritation in the mucous surface of the urethra may be so slight as to give rise to muscular contractions only when aggravated by the contact of urine or of an instrument; and hence it is that these contractions may sometimes be obviated by merely lessening the acrimony of the urine, as I have frequently done by the use of alkaline and mucilaginous beverages. There are cases in which this irritation is so slight as to be unknown or unfelt, except when, under the influence of venereal excesses, debaucheries, or exposures to cold, it is sufficiently increased to provoke spasmodic contractions. It is then that we should not only endeavor to lessen the acrimony of the urine, but also to diminish the local irritation by means of baths, leeches, opiates, cathartics, &c.

Nothing is more unsatisfactory than the conflicting opinions of writers with regard to the most frequent seat of strictures in gen-

eral; but we may reasonably conclude that *spasmodic* strictures must occur most frequently where the muscular fibres are in greatest number; and, although they are met along the course of the spongy portion of the urethra, I think that they are most frequently found to exist in the membranous or, as Amussat has very properly styled it, the *muscular* portion of this canal.

Organic Strictures.—By this designation we understand those diminutions of the calibre of the urethra which are induced by such vital conditions of the tissues, and such deposits of new matter in them, as may either impair their normal elasticity or offer a mechanical obstruction to the flow of urine. A mere congestion of the mucous membrane alone, or in common with the subjacent structures, may impair their elasticity and materially impede the flow of urine, without being susceptible of detection by passing the finger along the seat of stricture when an instrument is introduced during life, and without leaving any traces discernible by post-mortem examination. Such cases are by no means of rare occurrence.

It must be remembered that the walls of the urethra are habitually in apposition, or, in other words, that the canal is closed, except during the temporary distention occasioned by the passage of urine. Hence it is that a mere impairment of the elasticity of its tissues will impede to a certain degree the flow of urine. This closure is so complete that the orifice of the urethra is scarcely perceptible in the stump after amputation of the penis, and it is very difficult to introduce a catheter under such circumstances. Every one knows how difficult it is sometimes to catheterize a patient affected with phymosis, when the meatus externus is hidden from view.

The source of obstruction is sometimes referred to a *thickening* of the mucous membrane alone; but we apprehend that the degree to which this may be carried has been much exaggerated. Indeed we know that in other parts this membrane is not susceptible of much thickening, and that the true extent of this can only be determined by tearing up slips of it and comparing them with slips taken from a healthy surface. It is in this manner very rarely found to be more than double its normal thickness, which is very slight, and could not therefore of itself occasion any very serious obstruction. The error consists in confounding the infiltration of the subjacent cellular tissue with that of the mucous membrane itself. Yet, if this thickening be complicated with an

impairment of elasticity, the flow of urine may become very seriously impeded.

Bridle Strictures.—This term is applied to strictures characterized by a duplicature of the mucous membrane which is usually transverse and looks as though this membrane were pinched up or elevated by a thread passed beneath it, so as to constitute something like a valve. By slitting open the canal in front and behind the stricture, its valvular shape may be seen; but this disappears at once as the knife is carried through it. It is ascribed by some to an exudation of plastic lymph beneath the mucous membrane, which becomes organized and agglutinates the external surfaces of the duplicated membrane, and by others, with a greater semblance of probability, to the cicatrization of an ulcer. Civiale relates a case of the kind, which appears to have been caused by the lodgment of a small calculus which was found just behind it, upon post-mortem inspection. Be their real cause what it may, they are comparatively rare, and their existence has even been denied by some, although long ago described by Charles Bell and since by a number of other authorities.

Excressences.—The flow of urine may be more or less impeded by granulations, excressences, or carnosities springing up from the mucous membrane, under the influence of a scrofulous or syphilitic taint, and sometimes without any other evidence of such a state of the system. I recollect the case of a boy about 8 years of age, otherwise quite healthy, who presented a fleshy excressence just within the orifice of the urethra, which gradually increased until it protruded sufficiently to be seized with a pair of forceps, drawn out and clipped off with scissors. A slight hemorrhage ensued; but the obstruction never returned.

Indurations.—The strictures that most frequently claim the services of the surgeon are those which consist of an induration of one or more of the tissues constituting the urethral walls. There is very great discrepancy among authors, with regard to the phenomena which precede or induce these indurations, as well as in relation to the real anatomical condition of the parts thus affected. The most prevalent opinions are that some of these indurations are produced by an effusion into the tissues of coagulable or plastic lymph, which becomes organized and thus adds to the thickness of the tissues—that others result from the cicatrization of ulcers—that in some cases the plastic lymph is exuded upon the free surface of the mucous membrane and may even occasion adhesions as

well as indurations. Under all these hypotheses the induration may exist in one or more of the coats of the urethra; yet, while some insist that its seat is most frequently in the mucous membrane, others locate it in most instances in the sub-mucous cellular tissue. It is more probable that in the great majority of cases, the induration exists simultaneously in both the mucous and its subjacent coat, and that it extends to the corpus spongiosum only in extreme cases.

It is not a little singular that notwithstanding the extensive and minute study of pathological anatomy characteristic of the age, so little should be positively known or generally admitted with regard to so simple a point as the *thickness* of the coats thus indurated. Most writers aver that the obstruction is occasioned by an encroachment upon the calibre of the canal, consequent upon the thickening of its wall, or upon the deposit of new matter in these; whereas Reybard declares that he has never seen a case in which there was any thickening whatever, and that the coats are on the contrary *thinner* than in the normal state. (p. 116.) It must have occurred to all who treat many of these affections, that although the seat of stricture can generally be felt by carrying the finger along the course of the urethra containing a bougie, any marked degree of thickening can be very rarely detected. The author just cited insists that the finger detects the seat of stricture by the induration and loss of elasticity of the part, and not by any thickening. So far as my observation extends, I think this view correct in the majority of cases, though not in all.

The intrinsic nature of these indurations is a matter of much practical importance; but we here also find conflicting opinions. That these indurations appear to be fibrous, and even fibro-cartilaginous, is admitted by all. Are these mere modifications of existing tissues, or are they new products—heterologous formations? According to Cruveilhier, the fibrous element takes the place of the pre-existing tissues; the mucous membrane disappears entirely, and so does the spongy body more or less completely, including, of course, the intervening cellular tissue. And while he admits the possibility of this fibrous structure being the result of inflammatory action, he is rather disposed to look upon it as consequent upon ulcerative destruction, in which case it would be an entirely new product. With Reybard, the indurated element is heterologous from the first inception of a stricture up to its most complete or fibro-cartilaginous development.

Now, what are we to infer from such discordant views entertained by men equally distinguished, as faithful observers of diseased structures? Are we to admit that Hunter, Home, Bell and Brodie, in England, and Ducamp, Lallemand, Amussat, Civiale, and Reybard, in France, could be mistaken with regard to the *thickness* of the urethral walls in strictures? It is unfortunately too often the case that even distinguished men walk in the footstepts of "their illustrious predecessors" without sufficiently verifying the soundness of the grounds upon which they tread. And yet it is only by exposing the errors of those who have gone before us, that progress of any kind can ever be attained. In the present instance, there has undoubtedly been a lamentable deficiency of original and unbiassed post-mortem inspections, and, at the same time, too great a disposition to generalize from a few facts. I believe, therefore, that organic strictures of the urethra may be found presenting every gradation, from mere inflammatory effusion into the tissues, up to the complete substitution of those by a fibro-cartilaginous and heterologous formation; that the tissues may be thickened or not, may be indurated, may be destroyed by ulceration, may be absorbed, and may be replaced by an inelastic fibrous structure. All this is in accordance with what we see in other parts of the body, and we know of no reason why the urethral walls should constitute an exception, due allowance being made for the irritating effects of the fluid (the urine) which must necessarily so frequently bathe the affected tissues. Thus it is that I feel disposed to harmonize or conciliate the observations of pathologists who may have been too hasty in deducing general laws from the few facts studied by each. This will enable us to reconcile the dogmatic differences of writers with regard to special plans of treatment, and to appreciate the value of each under the various conditions of the disease, instead of blindly advocating any particular procedure as equally applicable to all cases.

Having in these anatomical and pathological remarks confined myself to such points as might have a practical bearing upon the subject under consideration, I may be permitted to omit speaking of the number of strictures that may be found in the same case, of the regions in which they most frequently occur, of their remote and proximate causes, of their symptomatology, &c. Indeed, I do not know that our object would be promoted by the rehearsal of the generally received doctrines upon these branches of the question. I will therefore at once proceed to the examination of some

of the principal plans of treatment in common use. These may be considered under the three heads of cauterization, dilatation, and incision.

Cauterization.—In use among the ancients, this plan was not generally resorted to in England until highly extolled by John Hunter and Sir Everard Home; nor did it become popular in France until a still later period, when Ducamp and Lallemand became its leading advocates. But, notwithstanding the potent influence of such high authority, this plan of treatment was on the wane in England when taken up by the French, and is now very generally repudiated in both countries by the mass of practitioners. It was at one time much more resorted to in our country than it is now, and I think the tendency of the profession is leading gradually to its abandonment, or rather to its restriction to a small number of cases. I need scarcely observe that the caustic most generally used is the nitrate of silver. I will therefore confine my remarks to this agent. This may be used either as an excitant of new action, which may terminate in resolution, or as an escharotic for the purpose of destroying the morbid tissues. It is true, that one of our best authorities denies it to be an escharotic, in the following language:

"Nitrate of silver has been supposed to act as an escharotic. If this were the case it would be more likely to occasion than to cure stricture; for it would lead to ulceration, and the reparative process which would follow could hardly fail to cause a narrowing of the canal. The fact is, the only effect it produces is a detachment of the epithelium of the lining membrane, and a softening of the matter which gives rise to the obstruction; in other words, it acts mainly as a sorbefacient, *rousing the absorbent vessels* of the part, and *inciting them* to the removal of the adventitious deposit. The action of this substance is well known upon an exposed mucous surface. If, for example, it be put in contact with the tongue, lip, or palate, it instantly causes coagulation of the natural secretion, slight, almost imperceptible shrivelling of the epithelial investment, and increased discharge from the mucous follicles. *There is never any slough, or destruction of the vitality of the part, however large the quantity of caustic employed.*" (Gross. Dis. Urin., p. 643.)

The italics are mine. It would be out of place here to moot the physiological question of the susceptibility of the "absorbent vessels" to be *roused* or *incited* to the removal of adventitious deposits. But the whole paragraph, and especially the last sentence

of the above extract, might mislead the juvenile or inexperienced practitioner into a very mischievous use of the agent in question, either under the impression that nitrate of silver does not occasion strictures of the urethra, or that it is comparatively harmless even in large quantities. The views of Prof. G. are in direct conflict with special experiments and post-mortem examinations made on lower animals, for the purpose of determining the effects of nitrate of silver upon the urethra. (Reybard, 53, et seq.) Lallemand insisted that the caustic should be applied in sufficient quantity and repeated until the whole morbid structures were destroyed.

Nitrate of silver, I repeat, is used either as an excitant or as an escharotic: when used as an excitant, it is with the hope that by converting a chronic into an acute inflammation of a less obstinate character, the injurious effects of the former may be abated. And it cannot be denied that it has in this way sometimes been advantageous, in urethral as well as in other affections. But we should bear in mind that it is here amenable to the same objections that may be urged against its use in other localities—viz: that it may aggravate instead of benefitting the case. When used as an escharotic, according to the recommendation of its most strenuous advocates, it unquestionably destroys the mucous membrane and sometimes even its subjacent tissue, leaving, as has been abundantly demonstrated, especially by Reybard, a cicatrix tending continually to contraction, and resulting eventually in strictures of an obstinate or of an incurable character. Indeed there can be no doubt that the use of lunar caustic is one of the most fruitful causes of strictures of the urethra. I have repeatedly seen them induced in persons who have never had urethritis, but who had been subjected to one or more cauterizations for the relief of spermatorrhœa. This hazardous practice, become so common in our country upon the authority of Lallemand, should be reprobated, or at least restricted to cases that have resisted all other means; and even then be used with the utmost circumspection.

The observations of Reybard upon the effects of cauterization are so strongly corroborative of my own views, that I beg leave to translate the following passage:

"In the place of the urethral mucous membrane, which the caustic had destroyed along with the cells of the corpus spongiosum, the cicatrix may be seen presenting a brighter and more polished aspect than that of the mucous tissue. It is dense, compact, very resisting and utterly inextensible, as was proven

by our ineffectual attempts to dilate the stricture, before and after death.

"These experiments demonstrate that the tissue of urethral cicatrices is very retractile; that its retractility increases as its organization is completed; and that the shortening of this tissue cannot be prevented by attempts at dilatation made during the progress of cicatrization. I have even observed that the tendency of this tissue to retract was increased by the use of bougies, and that the stricture grew more rapidly when catheterism was practiced twice a day than when this was done but once in twenty-four hours. It is therefore true, that cauterization merely destroys one stricture to substitute in its stead another, often more extensive, more complete and more serious."

"In short, reason, clinical observation, and experiments upon animals, concur to establish the correctness of our views with regard to the formation of organic strictures as a consequence of the destruction of the mucous membrane by ulceration, and especially by cauterization." (Op. cit., p. 61.)

In addition to these objections to the Nitrate of Silver, we may mention the danger of its falling off the instrument while introduced and lodging in the canal; also, the risk of such a degree of tumefaction in the strictured portion of the urethra as to occasion retention of urine more or less serious. It should therefore be avoided, especially whenever the stricture is so great as to impede the introduction of a catheter of medium size.

From what I have said thus far it is evident that I am decidedly averse to the indiscriminate or even common use of the Nitrate of Silver in these affections. Yet I freely concede that there are cases in which the extreme irritability of the mucous surface offers a serious impediment to the use of bougies, and that in these a judicious resort to gentle cauterization will very happily subdue the irritability and thus materially facilitate the treatment by dilatation. Cauterization should in fact be regarded rather as an adjuvant to dilatation than as a special or radical plan of treatment. With this view, the most convenient instrument for its use is Lallemand's "porte-caustic," or some of its modifications, charged in the usual way and carried into the stricture, rotated and immediately withdrawn. This should only be repeated after the subduction of its effects, which usually requires a few days.

Mr. Henry Thompson's conclusions in relation to the use of caustics are as follows:

"That these agents are never to be employed for the sake of their escharotic or caustic powers, properly speaking.

"That the Nitrate of Silver, lightly applied, exerts a salutary action on the diseased surface of the urethra, relieving inordinate irritability, and checking undue vascularity and disposition to hemorrhage, as it does in similar conditions of the skin and mucous membrane in other parts of the body, and thus it becomes a useful adjuvant to dilatation.

"That the potassa fusa, as a caustic, is considerably more active than the preceding, and is therefore more dangerous of application. If used at all, it should be only in *very minute quantities*, such as fractional parts of a grain, inasmuch as it is exceedingly difficult to limit the action of so powerful an escharotic. It may, perhaps, aid dilatation in the reduction of some strictures, probably by facilitating the solution of some of their component tissues, when care is taken to employ it in obedience to the condition just named." (Path. and Tr. of Strict. of the Urethra. By H. F. Thompson, F.R.C.S. London: 1854. p. 220.)

Dilatation.—The treatment of strictures of the urethra by means of dilating instruments, is not only one of the most ancient methods, but also that which has most effectually resisted all attempts to supplant it. It is rational, safe, usually painless, not repugnant to the patient, and of more general applicability than any other. The instruments in most common use for this purpose are bougies, which may be made of various materials. We need notice, however, only those made of metal, gum-elastic and waxed linen. The gutta-percha bougie is apt to break, and should be repudiated. The cat-gut soon becomes rough and unfit for use.

The *waxen bougie* is a great favorite with some of the most skilful surgeons, who resort to it for the double purpose of taking an impression of the stricture and of subsequently dilating this. I must confess that I think the importance of the explorations made to obtain an accurate knowledge of the size, shape, &c., of the strictured portion of the canal, by means of the wax bougie, has been very much exaggerated, and that the data thus obtained, are indeed of little or no value in the treatment by dilatation, although they may perhaps aid us in determining the direction and extent in which incisions should be made when these are deemed necessary. Any stricture that is permeable may be treated by dilatation, and I do not see how this can be facilitated by a knowledge of the peculiar shape of the stricture. The waxen bougie is so

inferior to the metallic for dilatation that I never use it for this purpose.

There are various objections to the *gum-elastic bougie:* it is very difficult to keep during summer, in this climate, however well made; it deteriorates very soon by use; there are very few cases in which it can be as easily introduced as the metallic instrument.

The *Leaden bougie* is, I think, very decidedly the best in use. It is durable, may be shaped to suit the views of the operator, is sufficiently dense to exercise advantageous compression upon the tissues, and is of easier introduction than any other. A very simple experiment will serve to show the relative facility with which the different kinds of bougies may be introduced. Let a waxen bougie be held with a certain degree of force between the fingers and thumb of one hand, while an attempt is made with the other hand to draw the instrument through the grasp. Note the degree of resistance offered, and then repeat the same experiment successively with a gum-elastic, a steel, a silver, and a lead bougie. It will be at once perceived how much more firmly the fingers adhere to the wax than to the lead, and consequently how much greater is the force required to move the former than the latter—the resistance diminishes in the order in which we have just enumerated the materials. The leaden instrument may, therefore, often be introduced with ease, when those made with other materials have been tried unsuccessfully. It is so much superior to any other that I have used it almost exclusively for a good many years.

It should be remembered that leaden bougies are sometimes made hollow, and that they are then very easily broken. Having seen some very ugly accidents resulting from their fracture within the canal, I think that none but the *solid* ones should ever be used. The solid instrument, moreover, retains its shape better, is more dense, and its weight facilitates its introduction.

The treatment of strictures of the urethra by dilatation may be either *gradual* or *rapid*, but the former method is that in general use and approved by judicious surgeons. *Rapid* dilatation, by means of bougies, may be effected either by using conical instruments carried down with as much force as may be deemed prudent by the operator, or by the introduction in rapid succession of bougies of increased diameter, as advised by Beniqué, or, finally, by the use of instruments invented by Perreve, and variously modifi-

ed by others, consisting of two blades, which may be separated, more or less, after having been passed into the stricture.

If mere dilatation were the sole object of the treatment, the objections to the *rapid* method would still be very great: but when we recollect that a stricture thus dilated is by no means cured, that the indurated tissues or products of morbid action must be removed by the slow process of absorption, and that the treatment must be continued sufficiently long to prevent a reproduction of the disease, it must be conceded that rapid dilatation is entirely inadequate to these ends. It must be acknowledged that there is something fascinating in the idea of relieving a strictured patient in a few days, and sending him home impressed with the belief that an affection, perhaps of years' standing, has been thus so summarily disposed of. The conscientious practitioner should, however, beware how he be lured by such fair promises; for this practice, like most others entitled to the designation of *heroic*, is not without danger. But let us hear the language of others, lest we be suspected of prejudice; I quote from Thompson's Prize Essay: "Great mischief may very easily be done by rapid dilatation on any method—a proceeding, the exercise of which has been sufficiently reprobated. The semi-elastic constituents of a stricture must be gradually dilated if an efficient result is to be attained. Inflammation of the urethra and bladder, which, in patients laboring under chronic disease of the kidneys, may readily extend to these organs and be followed by fatal consequences, has been not unfrequently induced by neglecting this rule. Moreover, rupture of the urethra may be produced by rash treatment, an occasional consequence of which, even when the lesion is only slight in extent or degree, is the occurrence of phlebitis and purulent infection, with collections of pus in different parts of the body. Mr. Coulson, of St. Mary's Hospital, has recently called the attention of the profession to the connexion which exists between these causes and effects, having collected and reported twelve cases in which laceration of the urethra by sounds and lithotrites has been so followed. (*Lancet*, 1852, vol. 1, p. 562.) In these the disease appeared within a few hours after the use of sounds or bougies: in four cases for the dilatation of organic stricture; in four for the removal of fragments of calculi, chiefly in connexion with lithotrity; and in the remaining four for various other purposes, as enlarged prostate, retention in gonorrhœa, &c.

"Three such cases also have come under my own personal

observation; of these, two were due to dilatation of stricture, and the other followed the operation for lithotrity. It is an instructive fact, that in almost all these examples the effects in question have followed efforts to dilate the urethra which have been carried to a considerable extent, i. e., just as the maximum amount of distention has been reached, or when an operator has attempted, in the treatment of an old stricture, to dilate to a degree beyond what has been his previous habit, although perhaps only to an extent of one or two sizes of the catheter scale." (The Path. and Tr. of Strictures of the Urethra, by H. Thompson. Lond., 1854, p. 197.)

Reybard, who advocates the rapid dilatation in some cases, after stating his plan of procedure, adds: "But it is very rare that we find strictures sufficiently distensible to yield to as rapid a process of dilatation as that just mentioned. In most cases in which I have dilated the stricture thus promptly the walls have yielded only after being lacerated, either at the beginning of the operation or upon the introduction of a bougie of four or five millimetres diameter. This laceration is produced without much force, and for the most part without being known; but if the surgeon have his attention alive to the fact, he will always recognize its occurrence by the peculiar sensation transmitted through the bougie, by the sharp pain experienced by the patient, who will complain of a sense of tearing or rupture, and by slight hemorrhage. Subsequently the patient feels a scalding during micturition, larger instruments are more readily admitted, and a muco-purulent discharge occurs; all of which symptoms concur in establishing the fact of laceration.

"Even very distensible strictures can therefore be dilated but slowly without laceration. Indeed, in most cases the operation of dilatation can be repeated only at intervals of several days, without incurring the risk of laceration, of the febrile paroxysms so common in such cases, of inflammation of the urethra and its attendant blennorrhagic discharge, of inflammation and suppuration of the sub-mucous tissues, and of urinary fistula." (Translated from *Traité Prat. des Retrecissements du canal de l'Urêtre.* Paris, 1855. p. 227.)

The treatment by dilatation is of course only applicable to permeable strictures. It is true that impermeable strictures may, by the use of caustics or cutting instruments, be opened so as to admit a bougie; but this does not invalidate the position that permeability is a necessary condition of the treatment by dilatation, for

the bougie must be introduced before it can dilate. The plan I usually pursue, is to introduce as large a lead bougie as the passage will admit without violence or pain, and allow it to remain at first only a quarter of an hour. This operation is repeated only once a day, morning and night, increasing the size of the instrument as fast as this can be done without pain, and prolonging its retention to an hour. With a little instruction the patient is very soon enabled to introduce the bougie himself, so as to lessen the frequency of professional visits. It is important, however, to caution the patient very particularly against the use of too much force or the infliction of pain, for I have repeatedly known accidents produced by their over anxiety to hasten the process. A safe rule of action is to avoid giving pain by the operation. I am in the habit of increasing the size of the bougie, until a number 10 or 12 can be readily admitted, and then of gradually lessening the frequency of introduction and time of sojourn. It should be inserted often enough to prevent any tendency whatever to a return of the contraction, and although this may be at first necessary every day, it will soon be sufficient to repeat this only every second, third, or fourth day, and then weekly. But even after all seems to be perfectly safe, the patient should be fully and freely apprized of the great liability of such affections to return, and of the importance of detecting such a tendency as early as possible. This can only be done by occasional explorations, say once a month, with the bougie of largest size, when the slightest difficulty of introduction should be met by a return to the same treatment as before adopted.

Chills, followed by high fever, are not unfrequently occasioned by the use of bougies, however carefully managed, and should be arrested at once by the free use of quinine during the first intermission, lest they prove fatal, as is so often the case in those countries in which the advantages of quinine are less understood than in this. These paroxysms constitute what the French designate as "fievres pernicieuses," the synonyme of our "malignant intermittents." It is difficult to understand why such serious general disturbances should be induced by so trivial a local irritation, and it is equally incomprehensible that there should exist such striking analogy of pathology and treatment between the effects of a cause purely traumatic and those of one essentially atmospheric. I have seen patients who had never had a paroxysm of intermittent fever before, suffer most violent attacks of this kind after the introduc-

tion of a bougie conducted with the utmost care and without the slightest laceration. Arrested by quinine, the attacks would return upon the repetition of catheterism. The same has doubtless been the experience of all practitioners. I should remark, however, that this febrile tendency may be overcome by keeping up the effect of quinine after the arrest of the paroxysms and until the system becomes accustomed to the bougie. The administration of a pill of two or three grains of sulphate of quinine, morning, noon and night, for eight or ten days, and the introduction of the bougie once a day, for fifteen or twenty minutes during this time, will usually accomplish the desired toleration. I am under the impression that gentle cauterization of the affected portion of the canal with nitrate of silver once or twice, lessens the liability to constitutional disturbance in such cases, by blunting the sensibility of the affected locality, even though this may not appear to be unusually developed. I would therefore advise a resort to it upon the occurrence of a chill or febrile paroxysm.

I need scarcely state that the rapidity with which dilatation may be safely effected varies exceedingly, according to the nature of the stricture itself, as well as the general susceptibilities of the patient. While some considerable obstructions to the flow of urine may be abated in even a few days, others, which appear at first to be comparatively slight, may prove remarkably refractory, and consume weeks and even months in the treatment. It is therefore out of the question to fix upon any rule which should apply to all cases indiscriminately. The reputation of the surgeon, as well as the interests of the patient, require that the treatment be conducted as expeditiously as the circumstances of the case may permit, with a proper regard to security; but the judicious and conscientious practitioner will, at the same time, avoid the temptation of reaping laurels at the expense of undue risk to the patient. He will feel that he has done his duty when he has removed the disease without accident, although he may have subjected himself to the imputation of timidity or want of energy. We should, of course, in all cases, proceed as rapidly as may be safe.

Incisions.—The incision of strictures of the urethra may be made from within or from without; that is to say, by reaching the obstruction through the canal or through the skin. The internal incision may, moreover, amount to mere scarification or involve the tissues to a considerable depth. Internal incisions are advocated by surgeons under widely different circumstances, for while

some think it proper to resort to them in the great majority of cases, others restrict their use to instances alone in which the passage of a bougie is very difficult or even impossible. All, however, agree in the use of bougies afterwards, or, in other words, make the incisions initiatory to dilatation. The advocates of a general resort to these incisions as preliminary to the use of bougies, insist that they thus economize time and make the cure more effectual, whereas the opponents of this plan believe that it is less radical, or permanent, than simple dilatation, and that the disease is consequently more apt to return. Incisions undoubtedly facilitate very materially the use of bougies, and enable us in a few days to pass instruments of a calibre such as might have required weeks of gradual dilatation for their admission; but I am with those who think that the disease is much more apt to return when thus treated, than when the obstruction has been removed by the absorption provoked by dilating instruments. The use of the cutting instruments is, moreover, not always free from difficulty as well as danger, especially when the stricture is situated about or beyond the bulb of the urethra. We have to encounter by this process the dangers of false passages, and of urinary infiltration as well as of purulent infection, to say nothing of hemorrhage, which, although very rare, does sometimes become serious. Notwithstanding these objections, however, to incisions as a general practice, we are free to admit that cases are generally encountered in which the induration is so extensive or unyielding that it becomes necessary and highly proper to resort to them, even though the stricture may occupy the membranous portion of the canal. I should observe, however, that if the stricture be impenetrable, the induration should be reached from without; that is to say, by external incision, as this is both more easy and less hazardous.

Mr. Thompson expresses himself in the following manner upon this point: "The attempt to perforate an obstruction otherwise impassable, by pushing a pointed blade into it without a guide, must be always somewhat hazardous; extremely so, if it be attempted in the curved part of the urethra, for however cautious the operator may be, the blade may be most readily pushed out of the urethra into surrounding structures, and infinite mischief may result. Hence I feel bound, unhesitatingly, to discountenance the use of all curved instruments constructed on this principle, and if it ever be necessary to apply a 'lancetted stilette' without a guide (which I have never had occasion to do), its employment should certainly

be limited to that part of the urethra which is quite moveable, and where its direction can be controlled somewhat by the assistance of the hand not employed in directing the instrument. Less dangerous is it, as we shall hereafter see, to lay open the perineum and divide the stricture from without, thus giving free vent to noxious fluids of all kinds, than to wound the urethra from within, at or behind the bulb, as we run great risk of doing, when operating at six inches distance from the external meatus, and thus only make a channel for these matters into the erectile cavities and other structures around." (Op. cit., p. 224.)

I have deemed it proper thus to add the weight of Mr. Thompson's authority to my own, because of the less cautious views advanced by one of the most enlightened surgeons of our own country. Professor Gross, after advising internal incisions in "old, firm, and unyielding" strictures, adds: "And why should there be any hesitation or doubt concerning this operation? Where are its dangers, or the difficulties of its execution? I confess I cannot see any; and in making this remark, let no one regard me as a visionary enthusiast. What I say is not speculation, but the result of personal observation; not prejudice, but actual experience at the bedside. It is only when the stricture is situated far back, in the membranous portion of the urethra, that the method is obnoxious to objection. Under such circumstances, especially when the obstruction is nearly impermeable, or when it is accompanied by a tortuous condition of the urethra, there may, I admit, not only be danger in attempting division, but the operation requires an amount of skill and anatomical knowledge which few men possess. But even here, the well directed efforts of the patient and persevering surgeon will generally be crowned with success. To the unskilful alone is the operation a stumbling-block; to the ignorant, foolishness." (Op. cit., p. 790.)

The instruments used for internal incisions, consist of a canula containing a stylet, with a blade, more or less near its extremity, which may be projected in front or in the rear of the stricture, so as to cut from before backward, or from behind forward. There are various modifications of these "urethrotomes," to suit the views of the operator. Indeed they are so numerous that it is not always easy to name the author of any one that may be presented to us. They are all, however, constructed upon the same general principles. Some are straight and others curved, and the blade is so situated as to cut forwards, backwards or lat-

erally. Some are intended merely to scarify, whereas in others the blade projects sufficiently to divide the whole thickness of the urethra, and even the adjacent tissues. Those recommended by Stafford, Dr. Physick, Thompson, Civiale, and Ricord, will meet the exigencies of most cases.

A catheter of gum-elastic should be introduced into the bladder immediately after such incisions, and allowed to remain several days, or until a sufficient organization of plastic lymph has taken place, to prevent the bad effects of the contact of urine with the cut surface. Subsequently, it will be necessary to use bougies (metallic) to maintain the opening effected by the incisions, if not to increase it.

I have already intimated that even with the aid of such scarifications or incisions, many strictures will be found to return, sooner or later, after the discontinuance of the treatment. M. Reybard, however, has of late advanced the opinion that if the incisions be made sufficiently deep, the disease may be radically cured; and inasmuch as his views have been sanctioned by so able a body as the French Academy of Medicine, I beg leave to present a brief notice of them. In so doing, I will translate a portion of the Report made to the Academy by the Committee who awarded the Argenteuil prize to M. Reybard, in 1852, for his Treatise on Strictures of the Urethra. The members of this committee were MM. Bouvier, Gerdy, Grisolle, Huguier, Larrey, Laugier, Ricord, Robert and Roux.

"Urethrotomy consists, according to M. Reybard, of an internal incision extending not only through the stricture, but also through the whole thickness of the urethral walls. The two bleeding surfaces thus produced must be kept asunder so as to be separately cicatrized, and in this manner a new surface is added to what remains of the circumference of the canal, which increases its diameter, and remains permanent. This operation is therefore very different from mere scarification. M. Reybard was led to adopt this method by a study of the cicatrization which follows longitudinal incisions of the urethra in lower animals. He found that these wounds, when prevented from uniting, terminated in the formation of a polished, thin, and non-retractile cicatrix, which, added to the parietes of the canal, increased its extent."

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"Before practising urethrotomy, the patient should be prepared for it, by dilating the stricture so that it may admit the introduc-

tion of the urethrotome. If dilatation be too tedious or too painful, scarification should be resorted to.

"The urethrotome used by M. Reybard consists of a canula with a slit in its whole length, and containing a bladed stylet, which may by a simple and ingenious mechanism be projected so as to divide the urethra from behind forward.

"Whatever be the shape of the stricture, the incision should always be lateral, because the walls of the canal are here less thick, and we thus avoid the arteries of the bulb which are situated inferiorly. The section should include as already stated, the whole thickness of the urethral walls; and even if carried beyond this, there would be no harm done, as there is no important organ near. The depth of the incision may be approximatively estimated at five or six millimetres (from two to three lines), and its length should be about six centimetres (about two and one-third inches), the stricture occupying its centre. The longer this incision is made, the easier will it be to keep its edges separated.

"In order to secure the separate cicatrization of the surfaces of the wound, M. Reybard merely keeps them apart with dilating instruments carried into the urethra, but without exercising any painful compression. For this purpose he uses a double-branched metallic dilator, or a mercury dilator similar to the air dilator of Arnolt or of Ducamp. This instrument should not remain in the canal so as to cause irritation; but should be daily introduced for a few minutes during the twenty-five or thirty days usually required for cicatrization.

"The following are the phenomena observed during this process of cicatrization. The incision of the urethra is immediately followed by a bloody discharge which gradually diminishes during four or five days, and finally ceases as the inflammatory process closes up the cells of the divided spongy tissue. This discharge is followed by an oozing of matter, at first sero-sanguineous, and subsequently serous and sero-purulent, which continues until complete cicatrization. It is only in exceptional cases that true suppuration occurs."

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"The edges of the incision, being separated each day, will heal separately, and if care has been taken to carry the division through the whole thickness of the canal and to make it sufficiently long, the cicatrization will occupy not only the edges of the wound, but also the bottom of this or the space resulting from the separation

of the edges. This portion, which M. Reybard terms 'the intermediate cicatrix,' is formed externally to the canal and rests upon the subjacent cellular tissue. If the wound does not suppurate, the cicatrix will be polished, thin, and devoid of the retractility peculiar to the cicatricial tissue."

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"The accidents to be apprehended are, hemorrhage, urinary infiltration, febrile paroxysms, inflammation, and death.

"1. *Hemorrhage.*—Urethrotomy is, as we have already said, always followed by a discharge of blood from the divided spongy body. This continues for three or four days; but is rarely abundant enough to constitute real hemorrhage. In a series of thirty-two cases this accident occurred ten times. It did not take place in the two cases operated on by your reporter some months since at the hôpital Beaujon; but in one of these, a slight bloody oozing persisted upwards of two months whenever the patient made efforts at stool.

"The hemorrhage does not always occur immediately after the operation; it may show itself only at the end of several hours, or even days, and especially during the night, in consequence of erections. In nine cases it ceased spontaneously; in only one case did M. Reybard deem it proper to control it by compression applied along the urethra. When it coincides with paroxysms of fever (which is most frequently the case), the surgeon should not interfere too soon, for the bleeding is then advantageous and tends to prevent inflammation.

"It is not uncommon to see an ecchymosis produced by the infiltration of blood in the cellular tissue of the penis, scrotum, and perineum. This phenomenon is unimportant, and will disappear spontaneously or under the influence of resolvents.

"2. *Urinary Infiltration.*—It would seem that this accident ought to be the necessary consequence of a deep incision of the urethra. Observation, however, proves that such is not the fact. M. Reybard has ascertained that the urine flows through the canal without penetrating the cellular tissue when care is taken to prevent a coagulum of blood from forming in the wound. This is done by passing into the urethra for the two or three first days a bougie or a catheter whenever the patient wishes to urinate. The danger of such an accident lessens as we recede from the period of the operation and as the inflammatory action progresses.

"3. *Febrile Paroxysms.*—Those who are operated on, often ex-

perience during the two or three succeeding days, slight febrile paroxysms, which M. Reybard thinks may be usually attributed to the painful contact of the urine with the wound. But sometimes these paroxysms are exceedingly violent and assume a malignant character, such as may be observed occasionally after other operations upon the urethra.

"In our summary of thirty-two cases of urethrotomy, febrile paroxysms occurred in twelve, neither of whom died. The malignant type showed itself twice, and required the sulphate of quinine in large doses. The same remedy was equally useful in two other cases less severe; and in the eight others, the fever being milder, yielded of itself. The author thinks that this occurrence may generally be obviated by catheterizing the patient as often as necessary during two or three days after the operation, and thus preventing the contact of urine with the wound.

"4. *Inflammation.*—The inflammation which follows urethrotomy is less intense than one might expect from a wound so extensive and deep; it is indeed usually less than that which follows scarification. M. Reybard attributes this difference to the circumstance that the dilating instruments introduced into the urethra after the latter operation exert a much more considerable tension of the divided tissues than they do after urethrotomy.

"5. *Death.*—It is well known that death may result from the simplest operations upon the urethra. It has been seen to supervene very soon after the mere introduction of a bougie or catheter. M. Blandin observed it after one single scarification. (See Mem. de Reybard, obs. de Joly.) M. Civiale cites (Mémoire sur l'Uréthrotomie, p. 97) another case of death at the Hôpital des Vénériens, the result of one scarification. It is therefore not surprising that urethrotomy should also occasion it. We should, however, observe that this fatal effect rarely follows this operation, inasmuch as it occurred only once in thirty-two cases, and that even in this case extraneous circumstances may be found to account for its fatality."

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"Having indicated the accidents that may be occasioned by urethrotomy, we will now show the final results of this operation. Among the patients operated on by M. Reybard, there are several whose cases could not be followed up, and of whom we can therefore say nothing. But the last work of this surgeon contains 8 cases in which the condition of the patients was verified a long time after the treatment by means of explorations with a ball-

headed bougie, the only instrument which enables us to ascertain with exactness the relative dimensions of the different portions of the canal.

"Your committee of 1845 had already seen one of M. Reybard's patients ten months after the operation, whose urethra was found to remain as large as it was after the incision, although he had ceased to use bougies for six months. (M. Gerdy's Report.) Of the eight cases reported by M. Reybard, seven were his own, and one was communicated by M. Valette, surgeon of the Hotel Dieu of Lyons. This last is especially remarkable, for the patient had three strictures with fistulas in the perineum and inguinal region, and for twelve years the urine passed entirely through these fistulous openings. The persistence of the cure was verified twenty months after the treatment, at which time the urethra readily admitted a bougie of 8 or 9 millimetres. The seven patients operated on by M. Reybard were seen by practitioners of established scientific reputation, who have testified to the cure of each over their own signatures."

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"*Appreciation.*—What first strikes us in the work of this surgeon is the boldness and novelty of his operation. Never indeed, until now, have intra-urethral incisions been made so extensive and upon such sound principles. Another fact, equally certain, is that this operation has solved the problem of the radical cure of fibrous, thick strictures, involving sometimes the whole thickness of the urethral walls, and which have, until now, resisted the most varied and persevering efforts. By the extent of the incision, which is carried beyond the indurated tissues, and by the separation of its edges which is kept up, urethrotomy secures a large, polished and non-retractile cicatricial surface, formed at the expense of the morbid as well as healthy tissues of the urethra, and which is essentially different from that resulting from the development of fleshy granulations.

"The authentic facts of which we have given a summary, demonstrate that the cures thus obtained may be lasting; yet we do not think that such happy results should always be looked for. We regard a relapse as possible or even probable, when high inflammation takes place in the wound and renders inevitable the development of fleshy granulations. In this event, the cicatrix, instead of being polished, thin and non-retractile, will be similar to those resulting from suppurating wounds—will possess, as these

do, more or less retractility, and therefore be capable of reproducing the urethral obstruction.

"It cannot be denied that urethrotomy is a serious operation, and that it may occasion grave accidents; but, on the other hand, let us remember the prognosis of urethral strictures in which this operation may be used; let us bear in mind the series of infirmities and sufferings which embitter and abridge the life of such patients; and then let us decide whether, under such circumstances, it is not proper to resort to an effectual plan, although the cure has to be purchased at the expense of some danger. For my part, I am far from wishing to apply M. Reybard's method to all strictures of the urethra; but there are some of these which I would resolutely attack with this operation. Moreover, by glancing at the present practice of some of the English surgeons, it is remarkable to find that men of distinction, such as Syme, Coulson, &c., have arrived, by a somewhat different route, to the same results as M. Reybard. Their method, it is true, is more serious than his, since they add to the division of the urethral walls, that also of the skin, adipose tissue, muscular layers, the bulb, and in short of all the thickness of the perineum. I do not wish here to institute a comparison between the urethrotomy of our countryman and that of Mr. Syme, for these operations are very dissimilar in a surgical point of view. I merely desired to direct attention to the idea by which they were both guided.

"In conclusion, both experience and reason concur in placing the operation of M. Reybard among the conquests of modern surgery, and in reserving it as a precious resource in those cases of stricture which prove refractory under the methods of treatment hitherto known." (Op. cit., p. xix. et seq.)

If more extended experience confirm the views of M. Reybard and of his learned Reporters, then indeed will a vast advance have been realized in the management of one of the most trying diseases we are called upon to treat. I trust, therefore, that I will be pardoned for the lengthy quotation I have thought it necessary to make in order to bring this new plan of treatment fairly before the profession. I can say nothing of it from my own observation, but would certainly not hesitate to give it a fair trial whenever a suitable case presents itself.

External Incisions.—Cases of strictures of the urethra are occasionally encountered, which resist the usual methods of treatment and in which it may become proper to resort to an incision of the

urethra *through the skin*. This has been done as a dernier resort for a long time; but of late years Mr. Syme, of Edinburgh, has urged with much zeal the adoption of the procedure even in ordinary cases, or as a general plan of treatment. Like M. Reybard, with regard to internal incisions, Mr. Syme insists that external incision is alike prompt, safe and effectual. The profession in Great Britain has been warmly engaged in discussing the merits of Mr. Syme's plan for several years, and may be considered as still very much divided in their views of the subject.

Mr. Syme describes his operation thus: "The patient should be brought to the edge of his bed, and have his limbs supported by two assistants, one of them standing on each side. A grooved director, slightly curved, and small enough to pass readily through the stricture, is next introduced, and confided to one of the assistants. The surgeon, sitting, or kneeling upon one knee, now makes an incision in the middle line of the perineum, or penis, wherever the stricture is seated. It should be about an inch or inch and a half in length, and extend through the integuments, together with the subjacent textures exterior to the urethra. The operator then taking the handle of the director in his left, and the knife, which should be a small straight bistoury, in his right hand, feels, with his fore-finger guarding the blade, for the director, and pushes the point into the groove behind, or on the bladder side of the stricture,—runs the knife forwards so as to divide the whole of the thickened texture at the contracted part of the canal, and withdraws the director. Finally, a No. 7 or 8 silver catheter is introduced into the bladder, and retained by a suitable arrangement of tapes, with a plug to prevent trouble from the discharge of urine. The process having been thus completed—which it may be in less time than is required for reading its description—the patient has merely to remain quietly in bed for forty-eight hours, when the catheter should be withdrawn and all restraint removed." (Stricture of the Urethra. By J. Syme, 1849, p. 41.)

With regard to the cases in which Mr. Syme advises this operation, I beg leave again to use his own language: "There are two forms of stricture in which mere dilatation has been found inadequate to afford relief. In one of these the contracted canal is so extremely irritable that the introduction of an instrument aggravates instead of alleviating the symptoms, and exposes the patient to various dangers from the local and general disturbance thus excited. In the other the peculiarity consists in a contractile ten-

dency so strong as quickly to counteract the effect of dilatation, and thus renders it useless." (Edinburgh Monthly Journal, July, 1852, p. 33.)

From this quotation, as well as from the description of the operation itself, it is evident that Mr. Syme rejects the old maxim of making no external incisions unless the stricture be impermeable, and rather makes permeability a necessary condition for his operation. However much I am disposed to respect the old axiom just referred to, I think it would be unwise to make it a fixed rule of action, for there are undoubtedly many cases of permeable strictures in which dilatation affords only temporary and very imperfect relief, and in which even internal incisions will fail, unless perhaps made according to the principles of Reybard. I have present to my mind, very vividly, the history of a case I treated some ten years ago, which very fully illustrates the correctness of these remarks. It was that of a gentleman about 40 years of age, whose urethra presented a series of strictures very near each other, and extending from half an inch from the meatus externus to the anterior junction of the penis and scrotum; indeed the whole of this portion of the urethra was indurated and felt somewhat like a string of beads closely set. This case was the consequence of gonorrhœa, had been of several years' standing when I saw it, and had been treated by some of the best surgeons in our country. Dilatation, cauterization, and finally internal incisions, deep and repeated, had never given more than temporary relief, and the patient was obliged to keep up the daily use of a bougie in order to be able to urinate at all. The whole urinary apparatus had become involved, the bladder was very irritable, and the general health of the patient so much impaired that he was unable to attend to any business. An external incision comprehending the entire length of the induration not being deemed advisable, I proposed an opening to be made behind the scrotum, but as near it as possible, and to be kept open; thus simulating the course usually pursued by nature, in the establishment of a fistulous passage. The patient readily assented, and a free opening was made down to the groove of a director introduced into the canal; a catheter was then carried through this orifice into the bladder and retained a few days in order to avoid the danger of urinary infiltration. After this a bit of a large bougie, about two inches long, was kept in the opening to prevent its closure, and so secured that it could not penetrate too deeply. At first we used a bit of gum-elastic

bougie; but this would soon become deteriorated and unfit for use. We then tried a bit of leaden bougie; this did better, but was apt to slip out from its own weight. Finally, a small plug of white pine was adopted as the best material: whenever, however, its use was omitted a few days, the tendency of the fistula to close manifested itself, and the plug had to be replaced. By making a head to this plug, it could not pass it too deeply, and retentive means were dispensed with, the pressure of the scrotum being sufficient to prevent its escape. I had the satisfaction to see my patient rapidly regain his health, and resume his occupations. I was enabled to watch this case several years; and he had no farther trouble with his strictures, but still had to wear the plug. He finally died of some other disease. It is remarkable that the portion of the canal in front of the fistula seemed to have completely closed, for he could never after the operation pass any urine through it when attempting to do so with his finger upon the orifice made. The patient died at a distance, so that I had no opportunity to make a post-mortem examination.

I may be permitted here to relate another of those extreme cases in which the surgeon may be justified in resorting to unusual procedures. A negro man, about 50 years of age, had been many years afflicted with stricture to such a degree that he became unable to attend to any of his duties. The stricture was situated just in front of the scrotum; had been treated in the usual way by several physicians without success, and the patient could now pass his urine only by drops and with great effort. His general health was much impaired, and he was placed under my charge about fifteen years ago with the injunction not to undertake the treatment unless I thought I could make a radical cure. This was one of those cases which have given rise to so much discussion as to the value of the term *permeable*. It would be said by some to be impermeable because no instrument could pass through it; yet it was permeable to urine, for this fluid still made its way. I determined to make an external incision, to lay open the canal and then to introduce a catheter. But those alone who have attempted to open the urethra at a point closed by a thick fibrous texture, without the guide of a grooved director contained within it, can realize the difficulty of such an operation. In this instance, after laying open the induration, which was half an inch long, I sought in vain for the channel through which the urine had passed, and finally resolved to extirpate the whole of the indurated texture, to introduce a

catheter into the bladder, and to close the external wound by means of adhesive plaster. The wound healed by first intention, and the patient continued to keep the catheter in the bladder for a fortnight, after which he appeared to be perfectly well, but was advised to introduce a large bougie occasionally. The bladder had, however, become implicated, and he remained subject to attacks of cystitis, which in a few years became attended with very copious hemorrhages. It was not until then that the operation revealed one of its inconveniences; for the newly formed portion of the canal, not possessing any contractility, small coagula of blood would lodge in it, and impede the flow of urine until removed by a bougie. The repeated lodgement of these coagula gradually distended this portion of the canal, aud converted it into a small sac, after which it became very difficult to carry a bougie into the orifice of the natural urethra beyond it, for this being closed by its own contractility, the point of the bougie would be more apt to pass to the side of it than to penetrate it. Yet by simply breaking up the coagula, the urine would still readily flow. This man lived ten years after the operation, and finally died from the affection of the bladder, but never suffered any return of stricture.

But, to return to the consideration of Mr. Syme's operation, I must avow my decided objection to it as a rule of practice in the generality of cases. It is but fair, notwithstanding, that I furnish the results obtained by those who have resorted to this practice, The following statement is derived from Mr. Thompson's work. (p. 257.)

"The operation of dividing a permeable stricture upon a grooved sound as a means of cure has been performed, as far as I have been able to learn, about 115 or 120 times. Through the kindness of those gentlemen whose names are given below, from each of whom I have recently received communications either in person or by writing, I have obtained the histories of many cases hitherto unpublished, and have collected more or less of information, the results of which are annexed in general terms.

By Mr. Syme, above	70 times.	No death; a large proportion of the cases successful.
Mr. Ferguson	4 ..	One death; two tolerably successful; one doubtful. "Outlines of Cases," Nos. 1 to 4.
Mr. Cock . .	5 ..	One death; the remainder more or less successful. See "Outlines of Cases," Nos. 5, 6, 7, 8, and 9.
Mr. Coulson .	8 ..	One death; the remainder more or less successful. "Outlines of Cases," Nos. 10 to 17.
Mr. Erichsen .	5 ..	The majority more or less successful. One or two doubtful. "Outlines of Cases," Nos. 18 to 21. "Reported Cases," No. 17.

Mr. Haynes Walton	1	time	Successful. "Outlines of Cases," No. 22.
Mr. H. Thompson	1	..	Successful. "Reported Cases," No. 11.
Mr. Mackenzie	7	..	One death; the remainder more or less successful. "Outlines of Cases," Nos. 23 to 29.
Mr. Dunsmure	3	..	Two, more or less successful, one successful. "Outlines of Cases," Nos. 30 to 32.
Dr. F. Thompson	2	..	Successful. "Outlines of Cases," Nos. 33, 34.
Dr. Cruickshank	1	..	Successful. "Outlines of Cases," No. 35.
Mr. Fiddes .	6	..	Five successful, one doubtful. "Outlines of Cases," Nos. 36 to 41."

In the present state of our knowledge with regard to the procedures of both Messrs. Reybard and Thompson, I am disposed to regard them as valuable contributions to our means of treating strictures of the urethra, and to adopt them in such cases as may require them in consequence of having resisted other and simpler means. We are certainly not yet prepared to give them the preference over dilatation when this can be made successful.

In conclusion, I have only a word to say with reference to cases impermeable to instruments. In these, whether resulting from traumatic or other causes, we should first strive to render them permeable by the use of leeches, baths, opiates, &c., &c.; and if these means fail, we have no alternative left but external incision, however difficult this may be without guide.

I have already extended this paper beyond the limits of my original design, and still feel that I have not done justice to the subject assigned me by this society. An indisposition to tax your patience beyond endurance, must therefore plead my apology for the omissions that may be detected in this sketch of the treatment of an affection so fraught with interest to the profession and vexation to the patient.

ARTICLE XXXV.

Remarks on the Laws of Georgia relating to the Practice of Medicine—on the Resolutions of the State Medical Society for their Enforcement—for the suppression of Quackery, &c., &c. By JNO. STAINBACK WILSON, M. D., of Lawrenceville, Georgia.

Our object in this communication will be to suggest, admonish and incite, rather than to instruct those who have had such ample opportunity of informing themselves as to the legal relations of the Medical Profession in the State of Georgia. All who are conversant with the action of the State Medical Society, are familiar

with the "Report" of Dr. R. Q. Dickinson.* In that "Report" an attempt is made to systematize "the glorious uncertainties of the law;" and it affords the strongest evidence of the necessity of such an effort, while it is a striking commentary on the folly, obscurity and injustice of our legislation on medical subjects. As a proof of the folly and injustice of our laws, it is only necessary to allude to the legalizing of the Botanic humbug—the removal of all restrictions upon the practice of medicine for several years—the passage of an Act rendering it doubtful whether the alumni of the *chartered* Medical College of the State could practice without a license from the State Board—the permission of the graduates of *any* Medical College to practice—and, lastly, the passage of numerous special enactments, permitting certain individuals to practice Homœopathy, Hydropathy, the Dutch and Indian practice, &c., &c. As an evidence of the obscurity of the laws, we will only state that no less than *eleven* different, and often contradictory Acts, on the Practice of Medicine, have been approved by the Legislature within the last thirty years, or since the passage of the first law, in 1825. But one of the most striking evidences of uncertainty is to be found in the fact that even now, after the careful "Review" of Dr. Quintard,† and the labored "Report" of Dr. Dickinson, we are still not fully satisfied as to who *is* legally entitled to practice in this State. The latter gentleman, after giving an able summary of all the laws relating to this subject, together with a decision of the Supreme Court, arrives at the following conclusions, viz: "No person is authorized to practice Medicine or Surgery in Georgia, 'for fee or reward,' except—1st. The licentiates of the Medical Board. 2d. The graduates of the Medical College of Georgia. 3d. Those engaged in the practice *in this State*, in 1839." And 4th. "The licentiates of the Botanico-Medical Board—the graduates of the Botanic Medical College, and those engaged in the practice of this exploding humbug in 1847."

We have examined the laws and the decision referred to in the "Report," carefully, and our conclusion is, that Dr. Dickinson's list of legal practitioners is not sufficiently comprehensive; and that it should embrace those who were engaged in practice, in this State, prior to the year 1825, or before any restriction was laid upon the practice of medicine. We have also read the decision of the Supreme Court, in the case of Coyle vs. Campbell,‡ very at-

* Vide Transactions, &c. April, 1853.
† "Laws of Georgia relating to the Practice of Medicine."
‡ 10th Georgia Reports, p. 570.

tentively, and we confess that we are left in doubt, whether *all* persons engaged in practice in 1839, the date of the revival of the Act of 1825, are exempt from the operation of the revised act, by the proviso, excepting Thompsonians, "or any other practitioners of medicine in this State;" or whether the exception extends only to those "who came into the practice *between* 1836 and 1839." It will be seen, by reference to this case, that the counsel for Coyle endeavored to avail himself of this proviso, by claiming that *all* practitioners were exempt from the law of 1839; but this was not allowed by the Court, because such a "construction would defeat the whole body of the act." The Judge then goes on to say (we think it best to give his own words): "But it is not necessary to make it void. We give it a meaning—it means to except such persons as were, in 1839, in the practice of medicine, and who came into the practice between 1836 and 1839, whilst the Act of 1825 was repealed—persons who were then practitioners of medicine for fee or reward, and who began to practice when there was no law to prohibit them." We think, although this language is somewhat ambiguous, the inference is very fair that *all* persons engaged in practice in 1839, and *not* exempt by the proviso to that act, but that it only extends to the *favored* Thompsonians, and those who "began to practice *between* 1836 and 1839," &c. In concluding our evidences of the "uncertainties of the law," we would remark that we have had two objects in view: 1st. To show the obscurity of the laws; and 2d. To ascertain, if possible, who *is* legally authorized to practice medicine in Georgia. It is for the accomplishment of the latter object that we have adduced the case from the Supreme Court, even at the risk of being tedious. While we are considering the laws, we should add that the Legislature, at its last session, passed an act authorizing the graduates of "any Medical College in the United States, to practice physic within the limits of this State, and charge and collect for the same without license."*

After a careful review of all the conflicting laws relating to the practice of medicine, we are of the opinion that the following persons are authorized to practice in Georgia, for "fee or reward;" and that all who are not embraced under one of these heads, are obnoxious to the penalty affixed to the Act of 1825:

Legal Practitioners.—1st. The licentiates of the Regular Board. 2d. The graduates of *any* Medical College in the United States.

* Session 1853–'54, p. 87.

3d. Those who began practice, *in this State, between* 1836 and 1839. 4th. Those who engaged in practice prior to the year 1825. 5th. The licentiates of the Botanico-Medical Board—the graduates of the Botanic College, and those engaged in this practice in 1847; and, 6th. A score, or more, of Urine, Dutch and Indian quacks, who are permitted, by special enactments, to kill and swindle the credulous and unoffending people of the State.

If we have succeeded in defining the law, the next question for consideration is the necessity and policy of seeking a change or repeal of existing laws.

Our allusion, in the beginning of this article, to the folly and injustice of those laws, is a sufficient indication of the opinion entertained by us as to the necessity for their modification; and we flatter ourself that no argument will be required to demonstrate the correctness of our views, when it is known that Botanics—the graduates of *any thing called* a college—and a nameless tribe of individual empirics are allowed to practice under present regulations. But, while we admit that this state of things should not be tolerated by our Legislature, we are opposed to any attempt, on the part of the Medical profession, to modify the laws, under existing circumstances:—we therefore concur in the opinion expressed by Dr. Dickinson, that it would be "inexpedient" and impolitic to make such an effort; for the simple reason that nothing could be accomplished in the present state of the public mind. Instead, then, of striving for the obtainment of impossibilities, with a certainty of defeat, and a reaction fraught with injury to our cause, let us rather see to it that the existing laws, imperfect as they may be, are faithfully executed, and that the horde of illegitimate and lawless empirics, who hang like a dark cloud on the skirts of our profession, are arraigned to answer, at the bar of the country, for their offences against the laws of the land, and their unpardonable outrages upon suffering humanity. And in order to do this successfully, it is essential that we do all that we can to enlighten the people on medical subjects, by publishing in the "*popular channels*" of communication, the destructive evils of ignorance and empiricism, and the elementary principles of scientific medicine. Let this be done, and we will have no difficulty whatever in executing the existing laws, or in procuring a better code, which will utterly destroy the fungus excrescences which now flourish in such rank luxuriance upon the medical body, exhausting its vitality and making it "a by-word and a reproach among all the people."

But if Hippocrates would exert his legitimate influence on the community, he must look well to his own household: he must see that those who claim to be his lineal descendants, comply with the requisitions of the law, and that they are fully armed and equipped for a contest with the stolid obduracy of ignorance and the artful wiles of interest: his Temple must be cleared of the "money changers;" and he must remember that he cannot stand before his enemies until the "accursed thing" is "taken away" from his own "midst." For the accomplishment of these things, regular physicians must disclaim all fellowship with quack-procurers, nostrum-venders, patent-medicine certifiers and prescribers, by declaring all such unworthy of the "rights, privileges and honors of physicians;" and all Medical Colleges must be put under the ban of the profession which do not strictly enforce the published rules.*

We are pleased to see, by reference to the Constitution and Proceedings of the State Medical Society, that a laudable desire has been manifested by that body to effect the above most desirable objects. The Constitution excludes from membership, illegal, immoral and irregular practitioners—together with the patentees, certifiers, and dispensers of secret nostrums; and various "Resolutions" have been passed, and committees appointed, for the purpose of enforcing the existing laws on the practice of medicine. But as we are not aware that any thing has actually been done to carry out the designs of the Society, we hope we will be excused for briefly reviewing its "proceedings," for the purpose of reminding members of the duties imposed upon them.

At the meeting in 1851, a resolution was unanimously adopted requesting auxiliaries, and each physician in the State, to report the names of persons practicing in violation of the laws; and also those practicing in accordance with said laws: at the same time the Registration committee was "requested to take into consideration the existing laws of the State, which effect the medical profession, and to propose to the next legislature such amendments as in their judgment may be expedient. At the meeting before this, we should have stated that a committee was appointed "consisting of one from each Congressional district," of which Dr. W. L. Jones was chairman, whose duty it was "to address the Profession at large upon the expediency of organizing auxiliary Medical Societies; registering the names of all regular practitioners of medi-

* For a more full exposition of our views on *professional* reform, we would refer to the Nashville Journal, April, 1854, p. 199.

cine," &c., &c. So much, then, for the laws, and the "resolutions" of the State Medical Society, for their enforcement.

The question now for serious consideration is this: Will the Society be satisfied with the passage of idle and ineffective resolutions, which are neither regarded by the members nor the profession at large? Or shall they proceed to vindicate the laws—to maintain their own honor and respectability, and to restore the fallen glories of legitimate medicine, by the elevation and purification of their own ranks, and by visiting a righteous retribution on the vandal host of lawless empirics who have invaded the medical domain, brought disgrace and reproach on our time-honored profession, and scattered disease and death throughout the land?

We trust that this question will receive a hearty affirmation from every respectable physician in the State, and that each one will feel under a sacred obligation to respond to the call of the Society, and to do all that he can, regardless of personal consequences, in the cause of justice, science and humanity. It is true, that this would be an unenviable task, and those who engage in it would, in many instances, have their motives impugned, and be subjected to public odium and individual animosity; still, we contend that the magnitude and excellence of the cause justify—yea, *demand* sacrifices, should they be necessary, for the accomplishment of the great work; and we may be permitted to confirm the sincerity of our opinion by this declaration: Although we live by our profession—although it is our principal dependence for the support of a family, we had rather suffer immolation in an honorable effort to sustain the character of that profession, than to grow rich at its expense, by pandering to the clamors of popular ignorance and prejudice—by supine indifference to its interests—or by a criminal disregard of its high and sacred obligations. If these be the sentiments of the physicians of the State of Georgia, the resolutions of the Society *will be carried out*—the laws will be executed—the Temple of Medicine will be purified—the character of the profession will be elevated—its usefulness and respectability will be once more restored; and Scientific Medicine "redeemed, regenerated and disenthraled," with the gathered honors of twenty centuries clustering thick upon her, will again command the esteem, the admiration, and the confidence of the people. And do we need any incentives to action? We have *every thing* ennobling and animating to incite us in this great contest. The warfare is against ignorance and imposture—against disease and

suffering and death—against Charlatanism and deception: our aim is, the diffusion of sound, useful, *protective* knowledge among the people—the establishment of truth and justice—the suppression of frauds—the protection of our profession from dishonor—the promotion of the health, happiness, and general interests of the community: verily, ours is a *good* cause; it is the cause of humanity; it is the cause of GOD. IT MUST AND WILL PREVAIL.

Having now finished our remarks on the laws relating to the practice of medicine, &c., we will conclude with some suggestions in reference to the use of patent nostrums.

We fully coincide in the opinion expressed by Dr. Dickinson on this point, viz: "If legislation is needed in Georgia on any subject, 'relating to the practice of medicine and the sale of drugs,' it is in the suppression of the infuriate and wide-spread mania of gulling and swindling in the sale and use of quack and secretly prepared medicines." We also highly commend the plan suggested by him, that, "our legislature be respectfully and earnestly memorialized to pass a law prohibiting the sale, within this State, of any secretly compounded, or any pretended patent medicine, unless the composition of such mixture shall be plainly printed on the bottle or paper containing said medicine or mixture, with heavy penalties for violation or false representation."

In addition to this, we would propose that the memorial embrace a petition that a tax be laid on every patent-medicine agency in the State. This might be only restrictive, or, what would be better, it might be prohibitive. At any rate, it is probable that it would be a source of considerable revenue, (judging from the enormous consumption of nostrums by the good people of the State,) and thus a grievous evil might be made subservient to good. We may add, that a law of this kind was, a few years since, in operation in Alabama; but the legislature, in its wisdom (?) repealed it.

Now, whether we can exclude these vile compounds by law or not, if we can only make their composition known to the people by legislative enactment, or otherwise, we will have accomplished a great deal for their suppression. We would therefore suggest, in the absence of such legislation, that a Board of Examiners be appointed by the Society, whose duty it shall be to analyze all secret medicines imported into the State, and to publish the result of such analysis *extensively* "through the popular channels of communication;" and also, by means of a work devoted *expressly to*

this, and kindred purposes. We think that this would be a good plan, even admitting that the legislature *might* be induced to pass the law recommended by Dr. Dickinson; for it would be very desirable to have a board of competent supervisors, to see that the law was not evaded by false labels, and other devices, to which the *patent* adepts in trickery would be likely to resort. But we confess that we have very little hope of the passage of Dr. Dickinson's law by our legislature; and therefore we are the more inclined to insist on a plan by which, we think, much can be accomplished, *in spite of our legislators.* Another thing which should commend this suggestion to our favorable consideration is the fact, that it is perfectly consistent with the "plan" proposed by Dr. Robert Campbell, in his "Report on Empirical Remedies,"* which was adopted by the Society. It will be remembered that the author of that "Report" advises that a standing committee should be appointed for the purpose of collecting and publishing all the "pernicious effects, resulting from the employment of empirical remedies, which may come under the observation of the Society," &c. We would, then, respectfully urge the propriety of the appointment of the committee suggested by us, and also that it be made part of their duty to execute the above recommendation of Dr. Campbell.

We could say much on this prolific theme, and might multiply many words in exhorting the profession to *action*, for the suppression of the monstrous evil under consideration, but we think it useless; if the swindling, humbuggery, disgusting advertisements and loss of health, and even life itself, which physicians daily witness as the results of the nostrum trade, will not arouse them against it, *nothing will.*

One word as to druggists, and we have done. A resolution has been adopted by the Society, recommending its members, as far as practicable, to "patronize such druggists and apothecaries as refuse to vend and puff patent and secretly compounded medicines." Knowing, then, that this class constitutes one of the most efficient allies of the quack army, we do sincerely hope that respectable physicians generally will act in accordance with this resolution; and if no druggists can be found who have not defiled themselves, we suggest that physicians establish houses in the principal towns, by pledging themselves to support the proprietors of such, on condition that they deal not in the "unclean thing."

* Vide Transactions State Society, April, 1853.

ARTICLE XXXVI.

Notice of some of Dr. Drake's views, as expressed in his "Systematic Treatise, Historical, Etiological and Practical, on the principal diseases of the interior valley of North America," &c., &c.

BOOK THE SECOND—PART THE THIRD—TYPHOUS FEVERS.

As it is not our aim to enter into a critical review of the work before us, but simply to show that Dr. Drake's facts and reasonings tend, rather to establish (at least so far as the interior valley is concerned) a different conclusion from that to which he apparently arrives; and as it is our desire to present this view of the subject as briefly as possible, we shall, without any very particular regard to his arrangement or method, proceed at once to do so.

"Our physicians, (p. 358,) from the Gulf of Mexico to Lake Superior, or at least to the northern limits of autumnal fever, are familiar with the train of what, in their common parlance, are called *nervous* or *typhoid* symptoms, following, now and then, on cases of that fever; which, beginning with a vomiting, ends with a continued type. We are all, moreover, witnesses of the fact, that in some autumns a much greater proportional number of such cases occur than in others. In these secondary affections, we have the anti-type, as far at least as symptoms are concerned, of the primary forms of fever, which we are now about to study.

"These forms known under the names of typhus metior, typhus gravior, and typhoid fever, which I shall group together under the term Typhous fevers, are likewise met with from the Gulf to Hudson's Bay, extending many degrees further north than our autumnal fevers. Indeed they seem more especially to belong to the north, than the south: their base line may be said to be in a high latitude and elevations, as the base line of autumnal fever, and yellow fever, is in a low latitude and near the level of the sea, and as we advance to the south. They become rarer, just as the latter fevers become rarer in advancing to the north. Nevertheless, they do not appear actually to cease even at the Gulf of Mexico; and may be said, therefore, to possess a greater geographical range than our autumnal endemics or periodical fevers."

In giving an extended definition of these fevers, we are informed (p. 360) that,

"Typhous fevers are sometimes sporadic, but more commonly epidemic: in general the epidemic is local; occasionally extensive. The forming stage, with a few exceptions, is protracted, and characterized by signs of debility in the organism at large; the stage of reaction shows a continued type, and with evening exacerbations, may continue for forty, sixty, or even ninety days; the appetite is impaired; and the bowels, sometimes torpid, are in most

cases irritable, with a tendency to diarrhœa—the discharges seldom show increased, often diminished secretion of bile, and are extremely fetid; the tongue becomes dry, and sordes collect on the upper front teeth; the pulse is unnaturally frequent and rarely tense; the heat of the surface is sometimes burning, and the cheeks flushed; the eyes become dull and occasionally bloodshot; drowsiness sooner or later supervenes, with wild and muttering delirium; coma is almost universal; subsultus tendinum, especially of the arms, manifests itself, with efforts to catch and grasp imaginary objects; sudamina, petechiæ, and rose-colored maculæ, frequently appear; borborygmus is common; and a tympanitic condition of the bowels occasional; early bleeding from the nose may happen, and there is sometimes copious hemorrhage from the bowels. In many cases inflammation of the intestines, lungs, or brain, becomes associated with the fever. When these symptoms, or a majority of them, are present, the fever is typhus; when no other form of disease has preceded it, the fever is an original typhus; when the disease began as an autumnal remittent, an eruptive fever, or a phlegmasia, the symptoms which have been enumerated indicate a secondary typhus, or what has long been called the typhoid stage of the primary disease."

After giving a very interesting history of a general typhus epidemic atmospheric constitution that prevailed successfully in different localities throughout the interior valley during the years 1813 and 1815, and which did not entirely cease until 1823, we are then furnished with the local histories within the United States and Canadas of some twenty-six sub-epidemic and sporadic visitations of these fevers, all of which, with the exception of the Irish immigrant fever, are admitted by Dr. Drake to be clearly of domestic origin.

As most of these epidemic and sub-epidemic visitations "have occurred in the middle latitudes of the settled portions of the interior valley, between the thirty-fourth and forty-third parallels," we are admonished by Dr. Drake (p. 343) not to conclude that these are the latitudes most favorable to their production, as there is abundant proof to justify the conclusion that in lower Canada, continued fevers of a typhous type are in reality more prevalent sporadically, if not epidemically, than in the regions farther south. Again, on page 369, we are told that remittents, in the Appalachian alpine regions of the southern basin, at an elevation of some 3000 feet, tend to the continued form; and that when they do assume this type, although "the copious secretion of bile, the distinct remissions, and the occasional transformation into intermittents, which they present in the same latitudes at a lower level, are

not so frequent; yet the season of the year in which they prevail most, (August, September and October,) mark them as the climatic equivalents of the remitting fever of the low, warm plains and vallies between the mountains and the Mississippi."

Along the shores of some of our northern lakes, in the western portion of upper Canada, and in Montreal, there prevails a continued fever, described by Doctors Stratton, Hall, and Holmes, as frequently assuming *the remittent type.* Dr. Drake, in visiting the General hospital, at Montreal, on the 1st of September, saw many cases of this fever, and unhesitatingly pronounces it (p. 428) the equivalent of the *remittent autumnal fever* of more southern latitudes.

If it be true, then, that the autumnal continued fever of the more northern portions of the United States frequently assumes the *remittent form*, and the southern autumnal remittent fever, occasionally, instead of terminating by a crisis on the second week, (p. 452,) or assuming an intermittent form, takes on a *continued type*, and simulates an original typhous so closely that a diagnostic distinction between the two is impracticable, "and that this tendency is greater in the higher than the lower latitudes, and much stronger in some autumns than others"—How is it possible for us to resist the conviction thus so irresistibly forced upon our mind, that their difference really consists in nothing more than *grade;* and that they are all the result of similar causes, modified by season, locality and predisposition?

Under the head of Climatic Relations, we are informed (p. 444) that, "in our interior valley, continued fevers have the chief prevalence between the 32d and 48th parallels; in western Europe, between the 44th and 60th; and that where the mean annual temperature rises above 62°, or falls below 40°, they prevail but little on either continent."

As regards the season of their occurrence and their comparative prevalence within these latitudes, we are informed that, notwithstanding, on the whole, they prevail more in cold than in warm weather, the frequency of their commencement in the interior valley late in autumn compared with spring and summer, results, in all probability, from a union of their cause with that of autumnal fever in October and November.

The difference between the annual range of winter and summer temperature, in the interior valley, is shown by Dr. Drake to be about twice as great as that of the British isles; and the compara-

tive prevalence of continued fever in these different regions, inversely, to the range of their winter and summer heat, being least in the interior valley, and greatest on the Islands. It is also shown that typhous and malarial fevers all prevail most where the range between winter and summer is least. Thus:

"At St. Louis the range is 42°, and yellow fever is unknown; at Natches it is 29°, and the fever prevails occasionally; at Havana only 10°, and there the yellow fever is as constantly as typhus fever in Dublin. In the latitude represented by Cincinnati, the range is 40°, and the prevalence of autumnal fever is moderate. In that represented by Baton Rouge, the range is 28°, and the fever prevails every year as certainly as continued fever prevails in Glasgow or Edinburgh."

"It appears, then, that while climates which present but a limited range between their winter and summer temperatures, may, on that account, be exempt from some diseases, they are proportionably more subject to others; in the lower latitudes to yellow and periodical fevers—in the higher to typhous fevers. But how is it that the warm winters and cool summers—the moderate annual range—of Great Britain and Ireland, favor the production of continued fevers? This question cannot be answered without the introduction of another meteorological fact, viz., that where the range between winter and summer is small, the diurnal range is correspondingly small. Thus, in those islands it is much less than in the zone of the interior valley with which we are comparing them. Now, sudden and violent changes, and extremes of atmospheric heat, tend directly and powerfully to generate a phlogistic diathesis, which favors the production of phlegmasial diseases, but not of typhous fevers. *Such a diathesis may, indeed, be regarded as a preventive of those fevers.* On the other hand, those European countries in which they prevail to the greatest extent, have a humid atmosphere, as every wind, except those from east to south, (not of frequent occurrence,) necessarily brings moisture from the Atlantic ocean, the German sea, the Baltic sea, and the chain of lakes to its north-east, Ireland, England and Scotland being most exposed to this influence, and from the great prevalence of westerly winds, Ireland especially. Some of the enlightened medical historians of those islands have sought for a connexion between these fevers, and the quantity of rain; but the latter is not a measure of the humidity of the air, which can only be ascertained by experiments on the dew-point. That it is at all times very great, is generally admitted: the absence of extreme cold in winter, and high heat in summer, recognized under the last head, contributes to the same result; for intense cold precipitates the vapour of the air, and extreme heat raises it far above the point of saturation, and makes it to our sensations dry, when its absolute quantity of vapour may be very great. Dr. Ferguson has laid much stress on

the 'moist cold' of those countries as a cause of their fevers; and, *econverso*, we may assume that the dry cold of our valley is a cause of their comparative infrequency." (p. 445-6.)

Admitting the correctness of the foregoing positions, we are without any distortion of facts brought clearly to the conclusion, that we are never presented above the 32d or below the 43d parallels of latitude within the interior valley, with any thing more than a *malarial continued fever*, with affinities and resemblances much stronger marked in favor of our autumnal *remittents*, than the *supposed* primary type, as met with in the cities of Glasgow and Dublin.

To this conclusion, it is objected by Dr. Drake (p. 557) that, "this mingling between continued and typhous fever, has led some speculative men to assign them a common cause, and to constitute them a single species. But such a coalition would not be made by one who had been familiar with both forms, and had the pathognomonic characters of each impressed on his mind by sporadic cases, when the other was entirely absent." To which we reply that, were we so disposed, or did we even think it necessary to attempt to prove the *continued fever* of our interior valley, under the modifying influence of locality and season, of *malarial origin*, we do not know where we would look for more or better materials than are to be found in the work before us. In fact, we are told by Dr. Drake, on this subject, (p. 558,) that "in some autumns, in the high latitude, or latitudes, the type of the fever *may be continued*, and yet show its relation to periodical (malarial) fever, by prevailing chiefly in the latter part of summer and in early autumn, and terminating [at an earlier period, corresponding, &c.—*Rev.*] without the characteristic symptoms of typhous in the second week, corresponding to the time when remittent fever often terminates by a crisis, or in the intermittent form."

If we assume, then, the British isles as the especial home of typhus fever, with a climate and inhabitants whose social condition and political relations are such as favor the production of a typhous diathesis, it is clear that the differences existing, in these respects, between them and the interior valley of North America, are such as tend rather to a phlogistic than typhous diathesis. Somewhat in support of this opinion, we are assured by Dr. Drake that in Europe, where, on the whole, the cities suffer most from continued fever, in older settled portions of the valley, notwithstanding, cultivation has diminished the amount of periodical, and increased

that of continued fever. The cities and towns of these settlements are more exempt from typhous fevers, than are the open villages and country around them.

"Throughout our interior valley, there is an increasing tendency in the profession to refer all cases of continued fever, which present a striking development of abdominal symptoms, (especially when the cerebral are mild,) to the head of typhoid fever. This is generally done without any distinct conception of the relation between typhus and typhoid. The aim of those who make the reference is simply to identify *our* fevers with those of Paris. I need not here repeat, that the cases which present a striking display of intestinal symptoms, can, with no propriety, be erected into a distinct species; and if they could, the term typhoid would violate every rule of philosophical nomenclature—while, if we regard the cases to which it is applied as constituting a mere variety, it is equally objectionable, as involving no hypotheses, and simply indicating the most formidable localizations of the fever. The German phrase, abdominal typhus, is every way preferable." (p. 479.)

From the foregoing extract—no less than on account of its not having been heretofore applied to a fever resembling, but to an actual typhus fever—it appears that the term typhoid, as a distinctive phrase, is, by Dr. Drake, entirely rejected.

There were other chapters and sections, besides those on *treatment* and *classification*, (the latter of which we think decidedly judicious,) connected with the history of typhous fever, that we had intended noticing, but on account of the length to which our remarks have already extended, we will, at least for the present, have to deny ourself that pleasure.

Wetumpka, August, 1855. H.

Clinical Lectures on Hypertrophy of the Prostate with Retention of Urine. Delivered at the London Hospital, by JOHN ADAMS, Esq., F.R.C.S., Surgeon of the Hospital.

Gentlemen: These cases of prostatic hypertrophy are of every day occurrence. Their importance may be approximately estimated by their frequency, and the disastrous consequences to which they too often lead. I am therefore glad to have the opportunity of directing your attention to-day to this subject.

We have received into this hospital, during the last year, 177 cases of retention of urine, from all causes. Of these, only six have happened to females—the rest to males. The reason of this vast disproportion, is obvious enough. The length of the urethra in

the male, the existence of various muscles surrounding it, the position of the prostate gland at its commencement, the lodgement sometimes of small calculi in various parts of it, the existence of stricture (which is a disease almost exclusively of the male urethra), the severe attacks of inflammation to which the urethra is liable in gonorrhœa, all these causes predispose the male subject to retention of urine, and explain the important fact alluded to. I may also mention the injuries to which the male urethra is liable; all of which lead to a similar result. Now, I think I may venture to assert that, of all these sources of obstruction, hypertrophy of the prostate gland is the most common cause of the retentions of urine, which are brought to this hospital. I regret that the statistics of the hospital do not give us information on this subject; but in future, a better system of registry, now about to be adopted, will supply the omission.

This enormous mass of cases, which almost invariably come under your own immediate inspection and treatment, (independent of the surgeon,) gives you such a field of practical experience, as cannot be obtained any where but at institutions like this. I am sure you must have remarked, that it is my invariable custom to habituate the dressers of this hospital to the introduction of the catheter in all cases; and even in the worst cases of stricture, requiring the nicest manipulation, if I find that a student under my direction succeeds in the passing of an instrument into the bladder, I confide the case at once to him, to bring it to a successful termination. I dare say, you remember my saying to one of the students, in the beginning of the present session, in allusion to a case of retention of urine, that the best clinical instruction I could give, was to teach him to pass a catheter. The consequence of all this is, that the surgeon is seldom sent for to cases of retention. The house-pupils, under the eye of the house-surgeon, have generally done the business before his usual visit. It is, of course, not always so, as the present case exemplifies.

Let me now consider the case before us; here is a case of retention of urine, occurring in an old man of sixty-seven, who was the subject of a similar affection, about a fortnight ago. He could not explain the cause, but says that he was called on to pass urine many times in the night, and at eight in the morning complete retention came on. The very simple fact of the age of the patient should at once arrest your attention, as it is a most important element in estimating the cause of the retention. An old woman slips upon the pavement, and injures her hip, and cannot walk; she is brought to the hospital, and, without examination, you at once infer that she has fractured the neck of the thigh-bone. So retention of urine, occurring in an old man, leads you to the conclusion that the retention arises from enlargement of the prostate gland, and this is generally the case. Nevertheless, you ought to inquire into the history of the patient's case, and he will tell you, perhaps, that he never had any complaint in these parts, or any

difficulty in passing urine, until during the last six months, when he has found that he has been called upon more frequently to pass his urine, especially during the night, and that the stream of urine, although sufficiently full, perhaps, has lost much of its force. Sometimes there has been a great deal of pain, accompanying the efforts at expulsion. Well, with the brief history which you gather from your patient, your notion or idea is strengthened; but to set the question at rest, you pass your finger per anum, and at once all doubt vanishes, as you feel the gland enlarged, possibly to the size of your fist. It is a curious fact, that patients seldom experience any pain during the progress of the enlargement; but I have often ascertained that a slight tingling sensation on the dorsal aspect of the glans penis, in the course of the dorsal nerve, has been experienced, but no importance has been attached to it; in fact a man will say that he never knew he had any disease about him of the nature of enlargement at the neck of his bladder, until informed of it by his surgeon. You have now ascertained the cause of the disease, and you proceed to act accordingly. There is no use in wasting your time, and exhausting your patient's strength, by leeching, purging, warm baths, &c.; the catheter is the *unicum remedium*, and to this you at once resort. You call for a prostatic catheter, place your patient at the edge of the bed, or in the erect position, introduce the instrument *secundum artem*, and draw the water off. You then take out the catheter, order the patient to bed, and anticipate the necessity of a re-introduction of the instrument in three or four hours. I say in three or four hours, for you will usually find that the water begins to pour down rapidly from the kidneys, and the bladder is refilled, and requires, even more urgently than before, to be emptied; or possibly the passing of the catheter has ruptured some of the large veins in the neighborhood of the prostate, and a very considerable quantity of blood has become mixed with the urine, to the great increase of the contents of the bladder. The bladder should be entirely emptied, at each introduction of the catheter.

To proceed with the case: there was a difficulty which could not be overcome. The dresser of the previous week, under whose care he had been relieved, and who had recognized the case as one of enlarged prostate, by examination per anum, was foiled. The prostatic catheter was passed up to the hilt; and the elastic catheter was used without effect. No very small instruments were used in the case. It now became my duty, at the usual visit, to examine the case myself, and to relieve the patient at all hazards. I was apprised of the nature of the case, and finding that the ordinary instruments had been unsuccessfully used, I directed the patient to stand up, and took a full-sized elastic catheter, without stylet, straightened the instrument, and passed it along the urethra. I felt it hitch against the prostate; and having withdrawn it about an inch, I advanced it again, and it entered the bladder at once. Gentlemen, there is no mistaking the sensation experienced as the

catheter enters the bladder. It goes in, as the Americans would say, *slick;* and I dare say you know the meaning of that term.

My object, in the present lecture, is to explain the reason why one instrument succeeds in one case, and another in another. Mark me; I take no credit for the success of the manœuvre in this case. We are all liable to be foiled in our best endeavors; and I do not give much credit to those who say they are never foiled in passing a catheter. An inspection of the preparations preserved in all our museums, will show why their efforts have been crowned with success (such as it is). Perforation of the prostate stands in judgment against them. I cannot help thinking, that after fumbling about a case for a long time, our fingers get fatigued, and refuse to obey our will or inclination; and this is a cause of failure. A fresh surgeon comes forward; he gains knowledge by the failing attempts of his predecessors; he takes the very instrument they *have not taken*, and, with those advantages, no wonder he succeeds. If you will take pains to examine the bodies of patients who have died of retention of urine, and dissect out the bladder and urethra, you will find that the prostate enlarges in various directions. Sometimes it is the left lobe which is enlarged; sometimes it is the right; sometimes both are enlarged together, as is very generally found to be the case; but most frequently, the third or middle lobe is the seat of the enlargement, and by rising up at the orifice of the urethra, it dams up the bladder; indeed, John Hunter called it the valve of the urethra—and prevents the urine from escaping. Attention to these varied conditions will, I think, often explain why one instrument will pass more readily than another, in particular cases. Thus the middle lobe being the seat of enlargement, and the cause of retention, if this body rises up equally, the urethra elongates to a great extent, and it requires first, a large, long catheter—long to traverse the entire length of the canal—and large, to prevent it hitching in the prostatic sinus; next, that the point of the instrument should be tilted up, either by depressing the handle, or by inserting the finger per anum, so as to carry it well over the projecting third lobe; a gentle pushing forward of the catheter is then requisite, and the bladder is entered at once.

In other cases, the lateral lobes of the gland are unequally enlarged, the third lobe being free from any extraordinary increase of size, and the retention is due to the coaptation of the two lateral lobes, which sometimes dovetail into one another, and the urethra becomes deviously directed to one side or the other. In this case, the large silver prostatic catheter will not answer, and either a smaller instrument, or one with a small abrupt curve, (such as I now show you,) or, what I think is much better, a large elastic catheter, without a stylet, should be gently pushed along the urethra; it will gradually make its way through the winding channel, and enter the bladder at once. I think, in the case before us, the prostate has been enlarged in this latter method, and hence the facility

with which the catheter was introduced. I am almost tempted, in some cases, to try a long, nearly straight, silver catheter, but of course this would not answer in cases of hypertrophy of the third lobe; but if this be enlarged, and inclined more to one side than the other, the elastic catheter, introduced as I have just stated, may make its way more readily and easily than even the large prostatic catheter. Sir Benjamin Brodie generally employs the elastic catheter; and there is an obvious advantage in its employment as a general rule—namely, that, independent of other considerations, it is more easily retained in the bladder, if you wish to keep it in.

Let us further examine the case before us, and apply what we have just said: it appears, in the report, that the old man passed his urine himself, after the first day. Now, can we explain this? you may ask. Where is the enlargement to which the retention was attributed? Is it gone so rapidly? These questions no doubt suggest themselves, and are pertinent enough, and I offer the following explanation:—There has been superadded to the hypertrophy of the prostate, vascular congestion, and this having been relieved by the bleeding, occasioned by the catheter, and by the rest, purging, &c., the gland has been relieved, and has resumed its wonted size, (of course still much enlarged,) and the parts, therefore, have permitted the urine to escape. I can hardly think that anything like spasm of the prostate exists, although it is a muscular organ, or that it can have produced the impediment; and if spasm of the urethral muscles were the cause, the catheter could not so readily have been passed. Venous congestion—too often, perhaps, overlooked—has, I think, been the immediate cause of the retention of urine. I know instances of cases, which have led me to this conclusion. I knew an old gentlemen who always suffered retention after a nocturnal emission. In this case one can hardly suspect any sudden increase of size of the gland, except such as may have resulted from vascular congestion.

I need only say, in conclusion, that the case before us, having been completely relieved by the use of the catheter, employed night and morning for several days, is discharged, with the certainty that at some future time he will return to us, and require a similar mode of treatment; and so he will go on until the termination of his life, the intervals of retention being briefer and briefer, unless you put him in a way to do something for himself, of which I shall speak at another lecture.—[*London Lancet.*

The Physiology of the Different Varieties of Paralysis. By MARSHALL HALL, M. D., F. R. S., London. (Read before the Institute of France, Academy of Sciences.)

As there are two principal nervous centres, the brain and the spinal cord, so there are two great classes of paralysis, according as the influence of the brain or spinal system is intercepted or annihilated.

I denominate cases belonging to the first class, in which the palsied parts are deprived of the influence of the brain, *cerebral paralysis*. Cases in which the influence of the spinal cord is intercepted from my second class, *spinal paralysis*. I do not mean to imply by these terms that there are, in these cases respectively, lesions of the encephalon or spinal cord, but simply that by some disease or injury the influence of these organs is abolished, so far as the muscles of the palsied limbs are concerned. Hemiplegia is ordinarily a cerebral paralysis; but in some cases, a spinal paralysis also; whereas disease limited to a small part of the dorsal segment of the cord produces a *cerebral paralysis* of the lower extremities; the influence of the portion of spinal cord below the seat of disease continuing to reach the palsied limbs. The destruction of a considerable portion of the spinal cord, or a suspension or annihilation of the functions of the spinal cord produces a spinal paralysis.

A cerebral paralysis, I repeat, is one in which the muscles are deprived of the influence of the brain; a spinal paralysis, one in which the muscles are deprived of the influence of the spinal cord.

Facial hemiplegia is a cerebral paralysis; paralysis of the facial nerve is a spinal paralysis. The distinctive characteristics of these two classes of palsies are as follows:—

In cerebral paralysis, the influence of the will is alone interrupted. When this paralysis is complete, voluntary movements are abolished. All the functions depending on the medulla oblongata and spinal cord persist. We have, in different cases:

1. Emotional movements;
2. Movements connected with yawning, coughing, etc.;
3. Diastolic movements;
4. Tonic symetrical contractions of the hands;
5. Comparative increase in the irritability of Haller;
6. Comparative increase in susceptibility to the action of strychnia.

In spinal paralysis, the four species of movements above enumerated are not observed, and the Hallerian irritability is comparatively less.

I return to cases of hemiplegia. In most cases, shortly after the attack, there is somewhat of an amelioration, a partial return of voluntary power; the phenomena I have mentioned are manifested also. In other cases there is no amelioration; the phenomena adverted to are absent or scarcely perceptible. There are no tonic spasms of the hand and arm; the Hallerian irritability is not augmented. It might be said that such cases were exceptions to the rules I have laid down. The truth is, it appears to me, that, in such instances, the shock of the attack has been sufficient to destroy, so to speak, the nervous power of the spinal system. Thus, when we divide the spinal marrow of the frog from the brain by an incision, we suspend nervous power, so as to abolish diastolic

movements. A yet more violent shock, as a stroke of lightning, would annihilate it altogether.

These phenomena are objects of pure observation, excepting that relating to irritability. To test this function of the muscular fibre, I have experimented on various occasions, with the aid of galvanism, and repeated my experiments with every precaution.

I made use of a simple galvanic current, produced by a Cruikshank machine. I placed a palsied and a sound hand, for example, in the same basin of pure water, and the feet in another, and carefully observed which was affected by the slightest degree of galvanism. I found that in cerebral paralysis, the palsied limb is most susceptible of galvanic excitation; whereas in spinal paralysis, the palsied limb is less susceptible than the sound one.

I deduce from these experiments many conclusions of interest both to the physiologist and the physician.

1. That the brain, by its acts of volition, tends to exhaust muscular irritability.

2. That the spinal marrow, on the contrary, is the source of this irritability.

3. That galvanism will serve to diagnosticate between cerebral paralysis and spinal paralysis.

The phenomena I have already enumerated: yawning, the effects of emotion, diastolic movements, symetrical tonic spasms, the effects of strychnia, etc.

Besides cerebral and spinal paralysis, there are nervous affections connected with the medulla oblongata and pneumogastric nerves, which I propose to discuss on a future occasion, as well as the diseases of the ganglionic system.

Lastly, to complete our enumeration of paralysies, there remain several varieties of palsy that are exceedingly obscure; paralysis *cum agitatione;* paralysies *e plumbo*, *e rheumatismo*, *ex hysteria*, *e dentitione*, etc. Much labour is requisite before we can form clear ideas on these diseases. Emotions, spinal irritation, the action of poisons, the influence of pain, the effect of shock; what a field of study!—[*Virginia Medical and Surgical Journal.*

On some Inflammatory Affections of Bone and their Treatment. By Henry Smith.

He stated that there was more interest and more difficulty connected with the pathology of affections in bone than with the corresponding diseases in the soft tissues, and that during the last few years there had been a great increase in cases of inflammation in bones, owing either to some peculiarity in the human constitution or in the conditions of the atmosphere. This inflammation was produced in two ways—first, from some injury first received in the neighboring soft parts, and from thence propagated to the

subjacent bone. As an illustration of this form, he would mention whitlow, which had been of late extremely frequent, and which disease was generally the result of some local excitement primarily, which, being neglected or badly treated, would go on to inflammation of the periosteum and bone, and finally death of that texture, and probably destruction of a neighboring joint. In the second way, inflammation of bones, and especially of their shafts, was produced by a cause acting directly upon the bony tissue itself; and, as illustrations of this case, he would refer to the acute inflammation which sometimes followed the application of the saw after excision or amputation, or that which sometimes ensued upon a fracture of long bone. The author then proceeded to the consideration of the successive results of inflammation attacking bone, and described the conditions known under the name of denudation, purulent infiltration, and actual necrosis, which was the ultimate termination of inflammation. With reference to denudation of bone, the author particularly insisted upon the great importance of not mistaking this condition for actual death of the osseous texture, but he believed it frequently occurred, and was treated as such. In many instances, denudation might occur even to a considerable extent, and yet no real mischief have involved the bone, for it had only become deprived of its periosteum and inflamed, conditions admitting of perfect recovery. He refers to cases illustrative of this point, and mentioned one in particular, where a young girl had received an injury to the thigh, which was followed by rapid inflammation and deep suppuration, which was not at first detected. The matter was at length evacuated, and it was then discovered that a large extent of the femur was denuded. The patient was so excessively worn down by the suppuration and discharge of matter, that the surgeon in attendance deemed it necessary to amputate high up in the thigh. The parents would not consent, and the child was left to the resources of Nature; the consequence was, the health gradually improved, the discharge ceased, and the patient quite recovered her health. In this case the opinion was in all probability, that the thigh bone had become necrosed, but in reality it was only denuded, and was capable, as was seen, of recovery. When, however, inflammation attacked bone, in instances of persons affected with some constitutional taint, as struma, syphilis, or scurvy, further changes would take place, and then suppuration would result, either in the interior of the bone itself, or within its medullary cavity, and subsequently actual death of some portion; and such conditions were most formidable enemies to the operating surgeon, as they frequently obtained after direct injury by the saw, as also from fracture; and cases in illustration were mentioned where, when the inflammation was acute, the changes were most rapid. One case was alluded to, of a strumous boy, having received an injury to the elbow, severe disease came on in the joint, and Mr. Smith was compelled to excise it. The patient

recovered from this operation; but in six weeks fell down and fractured the same arm, just below the shoulder joint, and such rapid and acute inflammation followed that it was deemed necessary to amputate at the shoulder-joint. On examining the bone, it was found denuded of its periosteum to a great extent, and its medullary cavity infiltrated with pus. It was, however, a question with him whether this extreme measure was absolutely necessary. Further experience since this case has happened to him had taught him, that possibly the fracture here might have united, but he was supported in the opinion of amputating by some very able surgeons who were present. When the inflammation was of a more chronic character, it would lead in unhealthy subjects, to results as serious and as certain, but more slowly and with less constitutional disturbance; still, in time, complete or partial death of a bone would be brought about, and a series of pathological changes would occur which are very interesting to the surgeon to watch, and which are so well known as hardly to require description. As regards the treatment which should be adopted in these various forms of diseased bone, the author remarked, that when there was reason to believe that matter was deeply formed close upon bone, and was producing mischief, very free incisions should be made, and the matter evacuated. As a precautionary measure, this treatment would often prevent the bone itself being affected, as is frequently seen in the cases of whitlow, where early resort was made to incision; but where, on the contrary, the matter has been suffered to accumulate, the further change mentioned by the author would have taken place, and amputation of a portion of the finger was required. In cases even where a large surface of the bone was denuded and inflammed, the free evacuation of matter, perfect rest, and good support, will frequently lead to the restoration of the patient; and on no account should the surgeou be led to resort to amputation in a hurry, with the idea that because the bone was bare, death of that structure must necessarily ensue. Where, however, in acute cases there is probability that necrosis is occurring, a neighboring joint is perhaps involved, and the patient's life is in danger, amputation should be resorted to, but never hastily. In chronic cases resulting in necrosis, the surgeon must wait until the dead bone is loose, and then extract if possible. In some he cannot do so; and a case was mentioned by the author where he could not succeed in removing a large sequestrum in the femur; and in another similar case such an operation was successful, but it took him an hour to finish. When necrosis involved the extremity of a long bone, and the joint was otherwise diseased, resection would be applicable, and the author illustrated this by the case where he had lately performed excision of the knee-joint, and where, on examination, a small piece of necrosed bone was found just separating from the femur, and where the joint was otherwise diseased, a cure had been effected, and a useful limb was the result.—[*Western Lancet.*

Hints from a Cupper and Leecher. By J. H. Ross.

Having spent many years in cupping and leeching, perhaps I shall be excused for giving the profession, through your journal, a few hints in relation to some points which should be observed in the practice of this branch of therapeutics.

And first, let me say, that in the use of leeches, certain errors are by no means unfrequent, namely, that in leeching adults, the error in many cases consists in too *little* depletion; whereas, in young children, it consists in too *much*. It should be remembered, that one leech for a child a year old is, in ordinary circumstances, fully equal to twenty-five for an adult. A leech bites a child as though it were a perfect luxury. All the tissues are tender. But this is not all. It is not only easy for a leech to find bloodvessels in a child, but the circulation being more rapid than in adults, the flow is consequently augmented. Neither is this all. As a general rule, we can safely bleed a strong man until he faints; but never an infant. Moreover, two small leeches are always safer for a child that one *large* one, it being easier to control the bleeding from six bites of the former than from one of the latter. As a general rule, leeches should not be applied to the *throat* of a child, especially over the trachea. It is safer to select the superior portion of the sternum, which will usually fulfil the indications. Whenever applied, a young child should never be covered up, and left for nature to arrest the hemorrhage. I trust your readers will pardon me for calling their attention, as some of them will recollect, for the second time, to the importance of a cataplasm before leeching. It is common to foment the part after the leeches come off; but if it cannot be done but once, it had better be done in advance, and I will give a few reasons for such a conclusion. In the first place, it makes the part very acceptable to the leech, as it almost never refuses to fasten at once upon the skin thus prepared, and the time thus saved may be of great importance to the patient. It also saves much fatigue and anxiety, and enables the leecher to serve much sooner some other sufferer who counts the moments of delay as hours. But this is not all. It answers the end for which the poultice is intended (namely, depletion,) more perfectly when applied before leeching than subsequently. It is not an easy matter to soften and relax the dermoid tissue so as to promote the flow of blood to the best advantage in a moment. It takes time. If the poultice be delayed until after the leeches fill, it cannot be applied until the last one comes off; and it often happens that before this occurs, some of the bites have nearly closed, so that the benefit of the cataplasm, to a great extent, is lost. When, however, the poultice precedes the leeching, the moment that one lets go the bite bleeds at once, whether anything is applied or not. To be efficient, the poultice should be large and hot; and if a little mustard be added, so much the better. In a large majority of cases, leeches are preferable to cups

for the abdomen, perineum, neck, face, and extremities. For the thoracic, dorsal, and temporal regions, and especially for pulmonary, renal, spinal, and ophthalmic affections, cupping is often far more efficient than leeching. Moreover, the quantity of blood taken in leeching is always uncertain, there being in one case much more, and in another case much less depletion than is intended. It is impossible to tell before the leech is applied how much blood will flow, there being so many modifying circumstances; some of which, perhaps I may mention, though most physicians may be familiar with them.

Much depends upon the size of the leech; and hence many physicians, to take advantage of this fact, order large ones. But this is decidedly wrong; for in purchasing leeches, we have to take them as they run, both large and small; and therefore, if we select the large ones for those who first call, we cannot supply those who call subsequently with even an average size, and it is not treating them fairly; and though we give them the largest that we have, the doctor is decieved, and perhaps the patient suffers. Not only so, but sometimes we are compelled to purchase a lot (because we can do no better) which has not a *large* leech among them. The proper course seems to be to have the medium size the criterion, and to modify the number as a deviation from this standard may demand.

Again, the *condition*, and also the *position* of the part, modifies the bleeding. If the part be inflamed or vascular, the discharge may be profuse. If it be hard, swollen, œdematous, cold or exsanguineous, little blood may be obtained. The force and the frequency of the *pulse* should be taken into consideration. The position of the part will also, as I said, modify the bleeding. For example, a leech-bite upon the hand, which bleeds profusely while it hangs down, will stop at once on raising the hand above the head. There are other modifying circumstances which I need not stop to name. The average quantity of blood that a leech draws is about two drachms, which, with the subsequent bleeding, amounts to about three-quarters of an ounce. To arrest the bleeding, I have always found a simple compress sufficient, though various styptics are used.

Although I intended to say something further on the subject of cupping, yet as I have already occupied more space in your valuable journal than I have any right to claim, I must omit it, at least for the present. In regard to sustaining those who make a specialty of this branch of therapeutics, perhaps I may be permitted to say a word. It is generally admitted that there should be in all large cities, competent persons to attend to these applications, and in cases which require very nice and careful management, physicians are generally very glad to avail themselves of the services of some skilful hand. But it should be remembered that these cases will by no means sustain him. His principal support must be derived from the common every-day cases; and if physi-

cians adopt the practice, as is often the case, of sending to the nearest apothecary for the leeches, or a leecher, saying anybody can put them on, he cannot be sustained. The truth is, apothecaries, by each one doing a little, do just enough to spoil the business, with little or no profit to themselves. Moreover, if the patient, or any inexperienced person applies them, he seldom does it to the best advantage; frequently cannot make them bite, almost always produces much fatigue, generally loses time, and gains nothing in the end.—[*New York Medical Times.*

Quinine in Yellow Fever.

We make the following extract from the record of the Physico-Medical Society of this city, inasmuch as it contains facts which will be interesting to the profession; the evidence adduced in favor of the use of the sulphate of quinine, as administered in the Charity Hospital in yellow fever, is so conclusive and so reliable, that it cannot fail to weaken the prejudice which exists against it in the minds of many excellent practitioners.

"Dr. Hunt, after adverting to a late discussion on fatty degeneration of the liver, and giving his views on that subject, and the general pathology of yellow fever, said that he had stated at a previous meeting of the society, when advocating the treatment of yellow fever by the use of quinine and opium, that he was confident that of the patients admitted into the Charity Hospital during the late epidemic, and during the expiration of the first twenty-four hours of the attack, not one in fifteen had died; he was now prepared to show, by the best authority, that not *one* in *twenty* died of those who entered within the specified time.

"On an examination of the books of the hospital, he had found that there had been 565 admittances of patients of yellow fever, who entered within the first twenty-four hours; only 27 of whom had died. Of these, fully fifteen-sixteenths had been first seen by the house surgeon, Dr. Choppin, or his assistant, Dr. Canter, whose almost invariable custom was to administer the haustus quiniæ of the house." This, as it is well known, consists essentially of twenty grains of quinine and forty drops of laudanum.

[*New Orleans Medical News and Hospital Gazette.*

On the Condition of the Uterus during Menstruation. By M. JUDEE.

From the examination of the uterus in three women who died during menstruation, M. Judee concludes that the fluid is not discharged from its body or the cervix uteri, but issues solely from the highly congested os uteri. The body of the organ was found somewhat enlarged; its walls being thickened and its interior lined by reddish gelatinous layer, about two millimetres thick, consisting of a beautiful capillary network enclosed in a mucous-like membrane. This was easily scraped off, and below it the uterus was found white and infirm. It terminated at the level of the

upper orifice of the cervix. The interior of the cervix was of a yellowish or greyish colour, and seemed to have undergone no alteration. The lips of the os uteri were swollen, and of a dull red, deep blue, or even blackish colour, and in one case they assumed almost a fungoid appearance. On compressing this, droplets of blood oozed out from its entire surface, which was not the case with either the cervix or body of the organ. On making a section of the uterus, the body and cervix presented the normal fibrous, lardaceous tissue; but at the level of the os this was replaced by a kind of magma, containing some fibres, and much resembling a portion of apoplectic lung.—[*Western Lancet.*

Local Application of Copaiba in Cases of Blennorrhagia and Blennorrhœa.

Professor Marchal, of Strasbourg, in a note to the *Jour. de Médecine et de Chirurgie*, gives the result of several years' experience in the employment of copaiba, appled topically. At first he injected the liquid copaiba into the urethra of males and females affected with blennorrhagia; his success was various, the remedy sometimes effecting a rapid cure, and again failing altogether. To obtain more constant results he determined to make a trial of the copaiba diluted with gum arabic, in the proportion of five parts of the former to eight of the latter, and to this add an hundred parts of distilled water. Injections, with this liquid, succeeded perfectly in a female suffering a urethral blennorrhagia, the discharge ceasing in a very few days; the results were equally satisfactory in the male. To avoid the irritation sometimes caused by the syringe, he at first used a catheter through which to make the injections, but subsequently introduced a catheter smeared with the emulsion, not penetrating to the bladder, and allowed it to remain, properly secured, thus giving the urethra a copaiba bath. The success of this treatment has been constant, without internal medication; the cure being effected in from five to eight days. In the majority of cases this treatment was not commenced until the acute inflammatory symptoms had yielded to the proper means. The success of this treatment led M. Marchal to employ the same remedy in vaginal and uterine blennorrhagia, and also to leucorrhœa, by means of injections thrown into the vagina and uterus; also with tampons smeared with the liquid placed in the former, and with the same invariably good results. Injections thrown into the uterus, in these cases, have not been followed by the accidents sometimes supervening upon this practice.—[*N. Y. Journal of Medicine.*

Slow Poisoning by Copper.

Dr. Corrigan reports (*Dub. Hosp. Gaz.*) several cases of poisoning by copper, which are remarkable for the extreme slowness of pro-

gress resulting from the gradual introduction of the poison. In many instances it was the result of handling old or dirty copper, on which the carbonate had been formed. It was the carbonate from which the poisoning proceeded, and in this there is an analogy with the salts of lead. He notices a peculiar feature in these cases, viz: an edging of rich purple on the margin of the gums, of the incisor, canine, and bicuspid teeth of both jaws. This purple color corresponds, in situation, precisely with the coloring produced by lead, but the tint of color is so different as to decide at once whether it has proceeded from copper or from lead, for, while the color produced from lead is of a pure blue, that from copper is a well-marked purple, and even, sometimes, a reddish purple.—[*Ib.*

Treatment of Vaginitis.

M. Thiry prescribes, in the mild form of vaginitis, first, a bath and saline purgative; then, removing the vaginal mucus, he sprinkles over the inflamed surface finely powdered charcoal or Peruvian bark, and completes the dressing by isolating them by means of a tampon. The tampon is allowed to remain from three to five hours, and on its removal emollient injections are employed; usually, in about six days, the cure is complete. In acute vaginitis he employs the same treatment, but precedes the application of the absorbing powder with a rapid cauterization of the inflamed surfaces with the nitrate of silver. A single cauterization usually suffices, and the cure is complete in eight days. He also employs the cautery and absorbing powder in folicular vaginal inflammation, which is ordinarily observed at the neck of the uterus, and is characterized by red conical eminences, and abundant secretion.—[*Ib.*

EDITORIAL AND MISCELLANEOUS.

BIBLIOGRAPHICAL.

We have received through the house of Messrs. T. Richards & Son, of this city, who have them for sale, the following works:

Yellow Fever, considered in its Historical, Pathological, Ethiological, and Therapeutical relations. Including a sketch of the disease as it has occurred in Philadelphia from 1669 *to* 1854. *With an examination of the connections between it and the fevers known under the same name in other parts of temperate, as well as in tropical, regions.* By R. La Roche, M.D., &c., &c. In 2 vols. Philadelphia: Blanchard & Lea. 1855.

This is decidedly *the* great American Medical work of the day—a full, complete, and systematic treatise, unequalled by any other upon the all-important subject of Yellow fever. The laborious, indefatigable and learned author has devoted to it many years of arduous research and careful

study, and the result is such as will reflect the highest honor upon the author and our country. The number of contributions to the history of Yellow fever was so vast and these were so widely scattered throughout the medical literature of this and other countries, that their collection, comparison and digestion, into an accessible and tangible form, was felt to be a desideratum by all who had to encounter this fell destroyer. None in our country was better qualified for the task than Dr. La Roche, and the Profession must be under lasting obligations to him for the very able manner in which he has accomplished it.

We hope to be able to notice this work more at length, and to lay before our readers some of the author's deductions.

The Cause and Prevention of Yellow Fever, contained in the Report of the Sanitary Commission of New Orleans. By E. H. Barton, A.M., M.D., Chairman, &c., &c. Philadelphia: Lindsay & Blakiston. 1855.

The volume before us is a reprint, with additions, of a portion of the Report of the Sanitary Commission of New Orleans, to which we have heretofore directed attention. The additional illustrations and explanations add considerably to the value of this very interesting document.

A Manual of Pathological Anatomy. By Carl Rokitansky, M.D., &c., &c. Translated from the German. In 4 vols., bound in 2. Philadelphia: Blanchard & Lea. 1855.

The enterprising Publishers deserve the thanks of the Profession in this country for their fine reprint of Rokitansky's invaluable work. Published a few years ago in England under the auspices of the Sydenham Society, but few copies had reached the United States. It is now accessible to all, and should be attentively perused by whoever wishes to be well informed upon the subject of morbid anatomy.

The first volume, upon "General Pathological Anatomy," is translated by Wm. Edward Swaine, M. D., &c.; the second, upon the "Abdominal Viscera," by Edward Sieveking, M.D., &c.; the third, upon the "Bones, Cartilages, Muscles, and Skin, Cellular and Fibrous Tissue, Serous and Mucous Membrane, and the Nervous System," by Ch. H. Moore; and the fourth, upon the "Organs of Respiration and Circulation," by Geo. E. Day, M. D., &c. The labor of translating this extensive work, has thus been divided between persons specially qualified for each of its great divisions. A work so generally known and highly appreciated needs no commendation from us.

Elements of Medicine: a compendious view of Pathology and Therapeutics; or the History and Treatment of Diseases. By S. H. Dickson, M. D., LL. D., &c. Philadelphia: Blanchard & Lea. 1855. 8vo., pp. 750.

Indited by one of the most accomplished writers of our country, as well as by one who has long held a high position among teachers and practitioners of Medicine, this work is entitled to patronage and careful study.

The learned author has endeavored to condense in this volume most of the practical matter contained in his former productions, so as to adapt it to the use of those who have not time to devote to more extensive works.

The Diseases of the Heart and of the Aorta. By Wm. Stokes, Regius Professor, &c., &c. Philadelphia: Lindsay & Blakiston. 1855. 8vo., pp. 710.

What; seven hundred octavo pages upon diseases of the Heart and Aorta alone! exclaims a tyro at our elbow. Yes, and not one page too many. Dr. Stokes is a practical man, and has furnished us an admirably practical work. It is only by the aid of such monographs that one can become thoroughly acquainted with his profession.

Cod-Liver Oil with Quinia.—The London Lancet says, Mr. Bastick gives the following account of his mode of preparing this medicine: The oleum morrhuæ cum quinia is simply a perfect solution of quinine in cod-liver oil. The quantity of quinine may be varied according to the wish of the prescriber, although it is generally employed in the proportion of two grains to each ounce of the oil. This preparation is best made in the following manner: The requisite quantity of bisulphate of quinine is dissolved in distilled water, with the aid of a little dilute sulphuric acid. The quinine is precipitated from its solution by means of an alkaline carbonate; the precipitate is treated with boiling alcohol; the resulting alcoholic solution, after being filtered, is evaporated to dryness. The residue, which is pure quinine, is then added to the cod-liver oil, and the mixture is heated in a water-bath until solution is completely effected, which is known by the oil becoming perfectly transparent.—[*St. Louis Med. and Surg. Journ.*

Solid Cod Liver Oil. By Dr. Launoy.—The Greek philosopher used to say, "always take the shortest road and the simplest means." We will apply this maxim, says the Bulletin Gén. de Thérapeutique, to the solidification of cod liver oil. Take of cod liver oil, ʒiv.; spermacetti, (in the winter,) ʒvj., (in the summer,) ʒv. Mix well, and heat in a close vessel placed in hot water, then pour into bottles with large mouths, and permit the contents to cool without shaking. It is also very well to flavor this preparation with some of the fragrant oils.

The cod liver oil prepared in this way looks like a jelly, and can be swallowed rolled in unleavened bread, moistened with a little gum water or liquorice.

Dr. Launoy has frequently succeeded in getting patients to take this preparation, who had been unable to swallow the oil in a liquid state. The spermacetti is a valuable adjuvant, because it has been long considered as a gentle and soothing expectorant, and also because it assimilates perfectly with the oil without much augmenting its volume.—[*Virginia Medical and Surgical Journal.*

Tin Tumbler taken from a patient, post-mortem, and which had been introduced by him into the rectum, for the purpose of reducing prolapsus of that intestine.—The tumbler was sent to the Boston Society for Medical Improvement by Dr. John O. Stone, of New York city, and was presented, and the account of the case read, by Dr. H. O. Stone, of Boston. The fol-

lowing is an abstract of the detailed description of the case, read by Dr. S., and which was published in the Boston Medical and Surgical Journal of May 14th, 1834.

The patient introduced the tumbler on the 4th of April, 1834, causing its entrance into the bowel by sitting upon it. The tumbler being drawn upwards with the returning intestine, attempts were made by the patient to extract it, with his fingers, and by means of "shoe-maker's forceps." "With these he had considerably broken and flattened the edge of the base or rim, of the tumbler, and forced it beyond the rectum into the colon." It was found in this situation by the physician who was summoned, Dr. G. Moodie, of North Andover, Mass. Dr. M. introduced his "hand and arm into the rectum, seized" the tumbler and "made a powerful" but unsuccessful "effort to extract it." The blunt hook was next tried, without extracting the tumbler, although it was brought down so that "it could be seen." "Owing to its flattened state, it hitched in the plicæ of the intestine." Several physicians and surgeons were called in consultation; among others, Dr. Joseph Kittredge, of Andover, and Dr. Whiting, of Haverhill. No efforts at extraction by the hook or the fingers were of any avail; although the tumbler was brought into view and seized, powerful efforts being again made to disengage it from its situation. One of the practitioners again introduced his hand, but could not bring the tumbler away. The patient asked to have his abdomen opened, and the foreign body thus removed. "He was told that this would produce certain death." A proposition to divide the levatores ani was negatived by Dr. Kittredge, who feared fatal hæmorrhage. "The patient lived about three days after this. His tongue sloughed, and there was gangrene of the large intestines. The tumbler was extracted after death: it measured 3½ inches in length, 3½ inches in width, in the direction of the flattened part, and 2 inches across its base; it would hold nearly three gills." It is preserved in the Society's Cabinet.—[*Boston Med. and Surg. Journal.*

Palliative in Whooping Cough.—Dr. John G. Johnson, of Lockington, Ohio, in a communication to the Medical Counsellor, states that he has used with the most decided benefit (in whooping-cough) the prescription recommended by Dr. Murray of this city, and published in the April No. of this Journal, for 1848. The prescription is as follows: Potassa Iodide, gr. vi; Mucilage Accacia, ℥ vii; Syrup Senega, ℥ i; Tincture Lobelia, ʒ i, mixed; of which a teaspoonful four times a day may be given to a child two years old. "I was more than pleased," he says, "to see its great control over the spasmodic cough." This, we have no doubt, is a useful mixture in this troublesome disease, though we should think that the proportion might be varied with advantage and the quantity of the Iodide increased.—[*Ibid.*

Ergot.—A French Journal publishes certain conditions as contraindications to the use of ergot in labor. 1. Debility from the natural or pathological condition of the patient, requiring tonics. 2. An unusual distension of the uterus, requiring rupture of the membranes. 3. Rigidity of the uterine fibres from inflammation or congestion, requiring blood-letting. 4. Mental disturbance may suspend contractions, the cause of which should be removed. 5. Confined and highly-heated apartment, requiring ventilation. 6. Distention of the bladder, to be relieved by the use of the catheter. 7.

Intense pain in the small of the back often interferes with efficient contractions—to be relieved by bleeding and chloroform. 8. Premature rupture of the membranes. Uterine contractions are oftener impaired by plethora than debility. Women suffering from the asthenic diathesis are apt to have rapid labors; and the tediousness of labor in plethoric habits is relieved by suitable depletion. Ergot rarely fails to act, and act favorably, upon the parturient female, when the system is in a condition favorable to the natural contractions of the uterus.—[*Memphis Med. Recorder.*

Spigelia Jelly.—This elegant formula we find in the *Annuaire de Thérapeutique* for 1855, taken from the *Gazette Méd. de Liege.* It is recommended by M. Bonnewin as the most agreeable form of administering this favorite anthelmintic. ℞. Pulv. spigelia, ʒviij.; corsica moss, ʒiv.; boiled in 16 ounces of rain water until it is reduced to 10 ounces. The decoction should then be decanted into a sauce-pan containing 2½ ounces of white sugar, and again boiled down, carefully stirring with a silver spoon, until 4 ounces of jelly are obtained. It then should be strained through a sieve into a jar containing two drops of the essence of citron or caraway. This jelly is a very active anthelmintic, and so agreeable that children will seek for it with avidity. If kept in a cool place it will remain good for some time, and its flavour may be still more improved, by substituting for the sugar, either the syrup of gooseberries or mulberries.—[*Virginia Medical and Surgical Journal.*

Artificial Eyes.—The following scraps of information as to the employment of artificial eyes, which we have acquired in watching the practice at the Royal Ophthalmic Hospital, may be welcome to some of our readers: (*a*) The success in the deception as to appearance is generally most complete. Several very pleasing cases have fallen under our notice, in which a glass eye, by hiding a loathsome deformity, and restoring personal appearance, became the means of effecting a complete revolution in the worldly prospects of the wearer. (*b*) In order to complete success, it is very desirable that the substitute eye should move well. This, however, is not essential, as should the two eyes not move equally, the only defect suggested to the casual observer is that of a slight squint. (*c*) To secure the movements of the artificial organ, the natural globe, in its collapsed state, should, if possible, be retained in order to serve as a stump. This stump or cushion, receives the attached muscles and obeys their movements, of course carrying with it the concave glass eye which has been fitted upon it. (*d*) If the entire globe be diseased, and its removal necessary, the operation should be conducted on the modern plan, viz., by division of the muscles close to their attachments, nothing whatever excepting the globe itself being taken away. By this precaution the muscles will be left in their full length, and, becoming connected, in the course of healing, with the mass of cellular tissue, fat, etc., which remains in the orbit, will constitute a cushion possessed of a certain degree of mobility. (*e*) Glass eyes will not wear for ever. Even with careful patients the artificial eye generally requires to be renewed, or, at least, re-enamelled, once a year. It becomes coated at the back by concretions from the tears, and is then so irritating that its disuse becomes necessary. To obviate this inconvenience, patients should always remove them at night, and have them carefully washed; they should also, if convenient, lay them aside for a few days whenever the eye

becomes irritable, or a greater tendency to deposit is observed than usual. (*f*) Among the poor this liability to soon become unwearable is a serious objection to their use. Some surgeons have, indeed, almost ceased to recommend them to their Hospital patients on this account, reserving their employment for cases in which the sufferer appears more than usually intelligent, and likely to succeed in the management. (*g*) Mr. Gray, (of Goswell-street,) the maker of artificial eyes to the Ophthalmic Hospital, informed us, in answer to enquiries on this head, that he thought an artificial eye might, with ordinary care, be kept in a good state at a cost of about fifteen shillings a year. This estimate, of course, applies only to a pauper patient, to whom cost price only would be charged.—[*Med. Times and Gazette.*

Exemption of the Jews from Cholera.—Whilst reading in the *Lancet*, Mr. Huxley's article "On the Treatment of Choleraic Diarrhœa by Olive Oil," I was struck with the following passage: "And so surely will it yet be learnt that the remarkable escape of the Jews in seasons of Cholera is attributable to the frequent use of this oil. The fact is so notorious, that I am surprised the subject has been passed over as little more than the result of accident."

Mr. Huxley, like many others whose views have been published in the *Lancet*, on the exemption of the Jews from attacks of cholera, attribute that exemption to the use of olive-oil. For a time I was of the same opinion; but whilst searching for facts, for a certain purpose on this subject, I found that the members of the Jewish persuasion made great use of vinegar and lemon-juice, as well as of olive-oil, with articles of diet. The information then obtained, induced me to write, in a paper read by me before the Epidemiological Society, July 3, 1854, thus:—"Perhaps it will be found upon further inquiry, that the members of the Jewish persuasion of the present day are somewhat indebted to the use of vinegar and lemon juice, as well as to olive-oil, for their reported exemption from attacks of cholera. I possess a statement of the use made of both, with articles of diet, which seems to throw a light upon the subject. The merit hitherto, as far as I know, has been given to olive oil, abstinence from spirituous liquors, as well as to the precautions taken with respect to animal food before cooked, and to the observance paid to the cleanliness of all cooking utensils."

I believe it is now generally understood that the inhabitants of cider counties, such as drink cider, are to a very great extent exempt from cholera; indeed, almost entirely so. Very few persons in cider districts make use of olive-oil; but should it be proved that olive oil is the safe-guard as regards the Jews, perhaps it may be found that butter, cream, lard and the fat of very fat bacon, is that of those who reside in some cider counties, where they are plentifully supplied with such, and not to cider.—[*Dublin Medical Press, from Mr. J. H. Tucker in Lancet.*

Certificates to the Efficacy of Secret Remedies.—There are few ways in which good-natured people are doing so much harm, while meaning to do good, as in signing their names to medical certificates, to be distributed all over the land in the public newspapers, or thrust upon us, whether we will or no, at our very doors. This has got to be a crying evil in the land, and it is time it was corrected. It is doing much, very much, to impair the faith in remedies properly given, to shake confidence in the medical pro-

fession, and thus incidentally to re-act upon the community to their great disadvantage. It is a gross injury to the medical profession. It constantly taunts them with the insinuation, "Look here! what all your boasted science could not do, this man whom you denounce as an ignoramus, has done! This medicine has cured me; yours did me no good, and I might have been in my grave for all you! From this time forth, fling doctor's physic to the dogs, and let me have only the healing drugs of the inspired natural physician!" Waiving for a moment all question as to the amount of real efficacy in the remedies thus vaunted—granting even, for argument's sake, that the facts are as stated, what does it amount to? Only that a drug taken at the right moment has wrought a good effect—no more. For this, shall it be emblazoned in every newspaper sheet as the great catholicon? Why, here are two hundred physicians in Boston, doing, with the blessing of Providence, precisely the same thing every day! And are they justified in proclaiming their skill and the power of their remedies for this reason? No true physician, at any rate, would give an affirmative answer. And yet their patients forsake them, or secretly use while under their care any nostrum their assiduous friends recommend. Or if they ask the advice of their physician as to the expediency of trying the remedy, he has no means of knowing its real character, and of course cannot recommend it. Still human nature is such that even the mystery which shrouds it gives it a fascination, particularly if the dose be *pleasant to the taste.* Men of respectable position in the community give up their business to devote themselves to the sale of the article, and untold sums are their reward. Grateful patients eagerly subscribe the certificate of its real or supposed virtues, while yet in the flush of their enthusiasm at its efficacy, and the document goes to the world, to add one more to the legion of medical delusions which are a stigma upon the present generation. Let any intelligent man go into a public hospital, and he will find numbers of patients who will tell even more extraordinary experiences of their own—how they were full of pain, motionless, helpless, but in twenty-four hours they were changed men, to all intents and purposes cured. Others will tell you that for years they had not had the use of their limbs, but now they walk rejoicing. Happy as these occurrences are, blessed indeed to the patients, the physician who has been the fortunate instrument in bringing them about does not, or ought not, to claim any exclusive merit; rather does he most willingly point out to his professional brethren the means he has used with such success. Thus is the blessing extended beyond his own immediate sphere, and no selfish thought of personal profit limits the exercise of his professional benevolence. The medical journals are crowded with reports of just such cases, which go forth over the whole world to bless mankind. Nay, *these very remedies* are not unfrequently taken up by shrewd nostrum venders, and after being disguised by some inert addition, are sold to the unsuspecting public at a profit of thousands per cent., without the least credit being given to the man who first applied it for such a purpose. But there is another very important consideration which is entirely overlooked by the patent-medicine-swallowing, or the puffed-medicine-swallowing community, which is this—*medicines positively effective for good are equally powerful for evil.* The knife is a catlin with two edges, let him who uses it see that he cuts not his own fingers. And this is no imaginary casualty. It is a fact well known to physicians, that cases are frequently brought under their own observation, of excellent remedies

having been taken to great excess when not administered by the direction of a professional man. It is astonishing to see the recklessness with which people sometimes do this, taking *ad libitum* the most powerful medicines of the pharmacopœia, simply because under some circumstances they have been recommended to them by some respectable physician, who never intended they should be adopted into such promiscuous use. The charity of these good people is most liberally extended to their friends, inducing them to take the same, they alone being responsible for the consequences. And the reason for this—not always, but often—is to avoid the necessity of paying the physician the fee which is his due for advice on the subject. Again, supposing the secret remedy to have been effectual in certain cases, *the cases in which it has failed or done harm* far out-number them, and of these the community hears not. Many of the cases of supposed cure turn out to be only transiently benefitted, and the deluded sufferer only falls back again into greater hopelessness. Meanwhile the certificate stands, and money pours into the pocket of the nostrum-vender—what else does he care for?

We would remark, in conclusion, that—medical discoveries should be the property of the human race; as free for the use of mankind as heaven's natural gifts of light and air. Only when open to such unrestricted use can their real value be tested. The noble calling of physician ought not to be degraded to a mere matter of making money; the community are as much interested in this as physicians, perhaps more so. By following the course which is getting to be so common, they are discouraging and starving those whom they ought to regard as their true friends.—[*Boston Med. and Surg. Journal.*

Antimoniate of Quinia in Intermittents.—Dr. La Camera, of Naples, in treating a solution of sulphate of quinia by a solution of antimoniate of potassa, has obtained a white product crystalized in needles, bitter to the taste, and soluble in hot water and in alcohol and ether. This antimoniate of quinia has given excellent results in periodical diseases, both simple and complicated with rheumatism, in sub-continued fevers of Torti, and in pernicious fevers. The dose is 0.4 grm. to 0.6 grm. during the apyrexia, and it is rarely necessary to be administered a second time.—[*Journ. of Pharm.*

White Indians.—Dr. George Lathrop informs the editor of the Peninsular Journal of Medicine, that north of Washington Territory, there are Indians of fairer complexion and more Caucasian features than those in the latitude of Olympia. Some of them have red hair, and all of them are very high in the natural power of intellect. Their manufactures display superior mechanical capabilities, specimens of which he has obtained. As the neighboring coasts of neither Asia nor America furnish any race which could have originated this variety by intermarriage, it goes to show that in spite of Gliddon and Nott, climate and other influences may transform races.—[*St. Louis Med. and Surg. Jour.*

Dr. John Le Conte, of Athens, has been appointed Professor of Chemistry in the New York College of Physicians and Surgeons.

SOUTHERN

MEDICAL AND SURGICAL JOURNAL.

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ORIGINAL AND ECLECTIC.

ARTICLE XXXVII.

LETTERS FROM SAML. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY.

LETTER NO. 6.

MONTGOMERY, ALA., Sept. 25th, 1855.

Messrs. Editors—You will please remember, that in treating of the subject of congestion, I have uniformly denied that it had an existence independent of the existence of some other essential elementary or typical form of disease, but have maintained that all diseases with which it may be associated, whether intermittent or remittent fevers, typhoid or yellow fever, cholera or dysentery, rheumatism or pneumonia, measles, scarlatina, small-pox, or any other disease in which the condition may form a prominent trait in their character, are alike entitled to receive the appellation of congestive. This position is sustained by Dr. Bartlett, who, in his Treatise on Fevers, says—"The qualifying prefix *congestive*, like the term typhoid, is expressive of a pathologieal state or condition which may exist in different diseases. In this way, most writers speak of congestive varieties or cases of cholera, of scarlatina, of yellow fever, and so on: they mean simply those forms of these diseases in which this pathological element, thus designated, *predominates*." Exactly, Dr. Bartlett, that is just what *we* mean. But we mean something more; we mean, that all diseases in which that pathological element *predominates*, to be treated most successfully, the treatment must conform to that pathological condition.

I have maintained that congestion, as a pathological condition, was not dependent upon the causes which produced the diseases

with which it may be associated, for these often appear in their simple elementary or typical character, free from any of the signs or phenomena of congestion; but that it depended upon remote and predisposing causes, which operated antecedently, and sometimes independently of the causes which produced those diseases in their essential typical character; and that the same causes which would make an intermittent fever congestive, would make yellow fever, pneumonia, or scarlatina, congestive also. It will not be amiss to repeat here what I said on a former occasion, with respect to the influence of atmospheric heat upon the constitution of the inhabitants of hot climates, to the effect, that it diminishes the general vigour and inherent nervous power, diminishes the density and increases the elasticity of the moving fibres, which allows of the free exercise and play of the animal powers, and gives greater excitability or mobility to the general system, but diminishes the power of resisting the influence of depressing causes, thus laying the foundation for, or a predisposition to, diseases of depression and congestion. Besides this cause, I have included *all* the causes which tend to impair the healthful vigour of the organic nervous system, the most prominent and important of which is malaria, which is generally acknowledged to be the most prolific source of fevers in hot climates, which is not only engaged in the *active* production of these diseases, but, like atmospheric heat, with which it acts in conjunction, having the effect of impairing the general tone and vigour of the system, lays the foundation or predisposition to congestion. Hence, from a long residence in malarial regions, the inhabitants often have their health impaired, giving rise to premature old age—to visceral derangements, both functional and structural—to nervous disorders, &c., without their ever having really had an acute attack of malarial disease. But when this or other causes operate with sufficient force to excite acute disease, it is but reasonable and natural to suppose, that such disease will be much more likely to assume in them, the character of depression and congestion, than in those who have been but temporarily exposed to its influence.

It is in this way that I would account for the existence and prevalence of malarial diseases at seasons when malaria has long ceased to be generated, and when no such atmospheric influence exists. Not that malaria, as the *exciting cause of disease*, having been taken into the system, lies *dormant* until a favourable opportunity for the development of its influence—but from the fact of

its having already done its work in and upon the system, in the establishment of a predisposition to such form of disease. Hence the almost universal tendency of *all* diseases in warm and malarious countries, at all seasons, to take on the malarial and periodic character, whether they be congestive, typhoid, or otherwise. I would not, however, be understood as maintaining that malaria is the cause of periodicity, nor would I attempt an explanation of this most important and most mysterious and incomprehensible phenomenon or feature of disease; yet they appear to be strangely identified with each other.

I have maintained, also, that congestion of a single organ, which may occur in a variety of affections, did not constitute the pathological condition of congestion. European writers, however, (whose example has been followed by some of our own, and who have adopted their classification of the varieties of "pernicious fever," which they recognize as synonymous with our congestive fevers,) have furnished us with a distinct variety for almost every prominent symptom of the disease. Thus, Alibert, according to Dr. Bartlett, makes *twenty* varieties; Forti gives us seven; and Maillot, whose classification Dr. Bartlett seems to adopt, gives us four, namely: the "comatose," the "delirious," the "algid," and the "gastro-enteric." Now, it must be remembered that these writers are describing the different forms, varieties and modifications of a *particular disease*, and not a general pathological condition; and it is proper that they should notice every feature of those forms, varieties and modifications. But, with the exception of the "algid" variety, and the "gastro-enteric," as described by Dr. Parry, and some other American writers, and which corresponds very nearly with the character of the disease, as I have observed it in Alabama, which, as I have already shown, is but *consequential* of congestion of the liver, which may, and does as often exist with pneumonia as with "pernicious fever;" not one of the other varieties are entitled in this connection to separate consideration. But being based upon the *condition* of *single* organs merely, without regard to the general condition of the system, and which may exist as well without the existence of the pathological condition of congestion, as with it. Such are the comatose and delirious varieties of Maillot; such of Torti, with the exception of his "algid," and such, I dare say, with a majority of Alibert's; and though *coma* and *delirium* are the usual attendants upon congestion of the brain, every practitioner of experience and observation in the

South knows that these conditions of the brain often occur in intermittent and remittent and other fevers, which are *not* entitled to, and do *not* receive the appellative term congestive. And Dr. Bartlett, after describing these varieties, says, in conclusion—"It is proper to mention that the preceding varieties may be more or less *mixed up with each other*, sometimes one of them preponderating and sometimes another. It is hardly necessary to take any separate notice of the minor varieties, the cardiac, the icteric, the syncopalic, and so on." And so I think, for the reason that such a multiplication of varieties is calculated to create confusion, without any material practical advantages, and for the better reason, that the foundation upon which many of them have been made to rest, has no essential relation to the congestive condition, and those which have may be embraced under one or the other of the forms, or modifications, according to the classification which I have made of congestion.

On a former occasion, I stated that I might at some subsequent period express my views with regard to the typhoid condition, and finding the present a favorable opportunity, I will do so, for the reason, that though the two conditions, the congestive, and the typhoid, are totally different from each other in their character and the causes which produce them, yet they are often found to act reciprocally, or in conjunction with each other, not only to aggravate the character of the diseases with which they may be associated, as in the higher grades of our bilious fevers, and such fevers as Torti, Alibert, and others, have described as "pernicious fevers," but also to confound and obscure the essential typical character of those fevers, as well as those more decidedly typhoid in their character, such as yellow fever, typhoid or enteric fever, &c. Between the causes which produce these two conditions, (those producing the congestive, belonging to the dynamic, and those producing the typhoid, to the zymotic class,) there exists this material difference—that while the former act for an indefinite time, often producing a predisposition *only*, or if they act with sufficient force to produce disease, the subsidence or arrest of that disease does not destroy the predisposition, but leaves the system subject to a recurrence of the disease under the influence or operation of the same, or some other slight additional cause, while the latter or typhoid causes often act at once to produce disease, without the necessary aid of any predisposition, and having once acted in the production of disease, their further action

ceases, without leaving any predisposition to their recurrence, but on the contrary, their effect is to destroy or weaken the natural or inherent predisposition to such disease. Between the causes and the character of the diseases, to which these two conditions usually belong, there exists also this material and characteristic difference, that those of a pyrexial character, of the malarial and dynamic class, whether congestive or otherwise, and of whatever type, are made up of a succession of paroxysms or attacks, each one terminating within a given time, *not exceeding* twenty-four hours: while those which belong to the typhoid and zymotic class show no such signs of periodicity, but are characterized by a *single* protracted pyrexial or febrile stage, seldom terminating within twenty-four hours, but often continuing longer—such are measles, scarlatina, small-pox, &c., and such, in my opinion, are yellow fever, typhoid and enteric fever, and other fevers of that class.

Now, while I maintain that congestion has *no* typical character, but exists only as a pathological condition, and am willing to admit that the typhoid condition may exist in the same sense, as is often observed in certain febrile affections—bilious fevers, pneumonias, &c.—having no typhoid influence for their production, but during their progress a typhoid condition is generated in the system, from an accumulation of effete and poisonous matters, in consequence of defective elimination, which poisonous matters are incapable of reproducing a like condition in others, but die out with the disease, of which it is *but* the condition; there are other typhoid conditions, having an essential typical existence, and *sui generis* in their character, and being the product of a specific poison, which, when taken into the system, is capable of being regenerated, and of reproducing a like condition in others, requiring, however, as a necessary medium for such reproduction, an atmospheric contamination. That yellow fever belongs to this class, and *is not*, as many have supposed, of malarial origin, and a higher grade of bilious fever, I infer from the fact, that it is not subject to the laws of periodicity, as malarial fevers are, having *one* protracted pyrexial or hot stage, protracted beyond the limits alloted to the hot stage of malarial fevers; and that the cause of yellow fever belongs to the zymotic, and not the malarial and dynamic class, I infer from the fact, that like other diseases of that class, as measles, scarlatina and small-pox, whooping-cough, &c., one attack will measurably destroy the natural or inherent predisposition, and secure, to some extent, an immunity against another; while

one attack of malarial or miasmatic fever predisposes to, and favours the recurrence of another. From the fact, that other zymotic diseases, as scarlatina, measles, &c., have each a *specific* cause, operating under and controlled by the laws of elective affinities, manifest peculiar and characteristic signs of their identity, which they invariably preserve, however near they may approach in similitude; and believing yellow fever and typhoid fever to belong to that class, I infer that each of these affections possess a specific cause, and a specific sui-generic character.

Now, if my views are to have any practical bearing upon this subject, it is necessary that I should be very explicit in imparting them, with regard to the nature, the mode of action, and the effects of the operation of these specific typhoid causes. I assume, therefore, that the cause of each is a specific poison, which, when introduced into the circulation in sufficient quantity, a *ferment*, or the work of regenerating the poison in the system, commences, which process will continue under the *direct* operation and influence of the poison, constituting the febrile or hot stage of the disease, for a period of time, according to its typical character, which, if it be yellow fever, will be *not often less* than twenty-four hours, and *seldom longer* than seventy-two, when its *direct* poisonous action will cease, leaving as the *effects* of the process, or work of regeneration, and of the febrile or hot stage, a depraved and vitiated condition of the blood, with all the consequences characteristic of, and constituting the typhoid condition, not however as a consequence of the *direct* action of the original poison, but as the consequence of a rapid accumulation of effete and poisonous matters in the blood, consequent upon their *non-elimination* from the interrupted or suspended function of those organs upon which that duty devolves. If this be true, which I think few who have had any experience will deny, what is the first and most important duty required of the physician? Manifestly to endeavour to prevent the further poisoning, and the breaking down of the healthy constitution of the blood, by aiding the depurating organs in the rapid elimination, and preventing the accumulation of those poisons which are generated in the system, and thus preventing the formation and establishment of the typhoid condition. The means for accomplishing this will be more appropriately detailed hereafter, as it is more my object at present to examine into the nature of the typhoid condition, than to suggest means to prevent or to cure it. I may be permitted, however, to say, that if the proper means

should have been neglected, or should fail of producing their proper effect in this most important stage, all subsequent efforts will be uncertain and generally fruitless; for when the healthy constitution of the blood becomes once broken down in these affections, the nervous system is sure to sink under the depraved condition of the blood, as is usually the case in the *calm* or apyrexial stage of yellow fever, with a development of the characteristic phenomena of the typhoid condition, and if life does not become extinct, the case then becomes a question of time, and of physical or constitutional endurance, for the purification of the blood and the re-establishment of its healthy constitution, and the reparation of damage done to the solid tissues.

What I have said of the typhoid condition so far, has been with reference to its essential, typical and suigeneric character, and, as it were, of its *independent* existence; and my object in thus presenting it, divested of all encumbrances, was to demonstrate, as far as possible, such a character and such an existence, under which it is seldom, and in some places it is never, known to exist, especially in connection with yellow fever, which appears only at malarious seasons, in malarious regions, and which so often has the malarious influence impressed upon it as to have given rise to the belief that it was of malarial origin. Indeed so strong sometimes are the influences as to deprive it of all the signs of its essential typical character, abundant examples of which have been furnished us by Louis, in his account of yellow fever, as it appeared at Gibraltar in 1828; but we of the South need not go as far as Gibraltar for examples of the same sort.

The agency of malarial or miasmatic influences in the production of yellow fever (which is the same in its essential typical character, at *all times*, and under *all circumstances*) must be acknowledged; not, however, that it is necessary for its production in its essential character, but that it furnishes a nidus and a pabulum, as it were, and gives to it the great diversity of forms and modifications under which it is observed at different seasons and in different localities, without destroying its essential character. and a yellow fever, wearing the *external* livery of an ordinary intermittent, is as much a yellow fever, in its essential character, as it would be, divested of all adventitious influences. The want of a knowledge, or the want of attention to this important fact, and an effort upon the part of the profession to accommodate and adapt their plans of treatment and their remedies to those ever

varying forms and modifications, instead of its uniform and invariable typical or essential character, has been the chief cause, in my humble opinion, not only of the want of a greater *success* in its treatment, but the want of a uniform, systematic, and scientific plan of treatment, for the want of which we find that in New Orleans and other places, where they have the best opportunity for observing yellow fever, the medical journals, from year to year, teem with descriptions of the varying forms and modifications of the disease, effected by malarial and other adventitious influences, and the various and often heroic plans of treatment founded upon them; and members of the profession who have grown gray in the service, and who for years have followed out those changes, without having paid sufficient regard to its essential typical character, (which is alike dangerous, under whatever livery it may appear,) have found themselves standing as sad commentaries upon the slow progress and the uncertainties of the healing art; or what is more, finding their preconceived and cherished opinions and plans of operation baffled, and inadequate to the emergency of every change, they have thrown wide open the doors of the profession to every species of charlatanism, by publicly proclaiming that one system of practice in yellow fever is as good as another, or that all are worthless.

One of the modes of treatment predicated upon the supposition of the malarial origin of yellow fever and typhoid fever, which at one time seemed to meet with general favour, and consisted in the administration of large doses of quinine, and which was known as the *abortive* plan, I will notice here, for the purpose of showing, or at least of expressing my opinion. That while yellow fever and typhoid fever are often complicated with, and even obscured by, malarial influences, these influences do not materially change or affect them in their essential typhoid character; and while I freely admit the appropriateness and value of quinine, in controlling the malarial influences, and the malarial features in these diseases, I believe it to be totally unfit and inadequate to control them in their essential typhoid character; for, having their cause in a specific poison, which will require time for its elimination from the system, any other means than those which are calculated to aid in its elimination, will prove as abortive as would be an effort to abort scarlatina, measles, or small-pox.

As you may be somewhat at a loss to understand what object I have in view in departing so far from the subject of congestion,

and for saying as much as I have concerning the typhoid condition, I will explain by saying that it is necessary, for the accomplishment of one of the principal objects which I have in view, and which I intimated in my last letter, namely, the vindication of certain remedial agents against popular and professional abuse. Upon this subject, I shall say something in my next letter which will be agreeable to some of my readers, and not so much so to some others. So, until then, I shall remain, as usual,

Yours truly, SAML. D. HOLT.

ARTICLE XXXVIII.

Four and a half inches of a silver Catheter broken off in a false passage; its removal by an operation—Recovery of the patient. By N. BOZEMAN, M. D., of Montgomery, Alabama.

On the 2d of July, I received a message to visit an old gentleman in Coosa county, who, it was said, had broken a catheter in his bladder. I did not, however, reach his residence until the next day—some thirty-six hours after the accident occurred—I then met Dr. E. Mason of Wetumpka, in consultation.

Patient æt. 72; tall and spare built; for many years has labored under hypertrophy of the prostate gland, with all its train of evils. Dr. M. states that he and his brother, Dr T. W. Mason, within the last few years, had been frequently called upon to relieve him of retention of urine. When attacked this time, a Thomsonian was called in: he employed the catheter and afforded prompt relief. After doing this several times, he supposed the patient could catheterize himself, as he had often done before, and therefore discontinued his visits. In a short time the bladder became distended again and the introduction of the catheter necessary. The one employed was a No. 4: the patient says that it passed on very easily until its beak had nearly reached the bladder, then it encountered an obstacle; being anxious to get relief, he applied considerable force, hoping to overcome the difficulty. After persisting for some time, the instrument, all of a sudden, passed on, as he supposed, into the bladder; no urine escaping, however, he was induced to withdraw it; but, to his very great astonishment, only a part of it came, followed by a discharge of blood. At once he apprised his physician of what had happened: this gentleman, upon his arrival, found the bladder very much distended, and

proceeded to introduce another catheter which, he says, he did with much ease. As to the situation of the broken one, he expressed his belief that it was in the urethra. I was somewhat surprised at this statement, having just been told that the second catheter was passed with so much facility.

To satisfy myself, I now introduced a sound, and sure enough felt a foreign substance far back in the urethra. Notwithstanding its presence there, the sound passed into the bladder very readily. To remove all doubts as to the true nature of things, I next introduced my finger into the rectum: here I could feel a hard body pressing on the left side of the bowel and closely embracing the prostate gland, which was enormously enlarged; it extended as far forward as the bulb of the urethra. The manner in which the accident occurred now admitted of an easy explanation. The impediment which the catheter met with near the bladder was doubtless the prostate gland. The undue force employed by the patient to overcome it, caused a laceration of the membranous portion of the urethra—thus allowing the instrument to pass down between the two layers of the deep perinæal fascia to the situation just described as to the breaking of the catheter. In the first place, it was an unusually light one, and taking the course it did around the enlarged prostate gland, it was bent. Upon being straightened again by the attempt at withdrawal, it broke and separated. That a catheter can be broken in this way, any one may satisfy himself who feels disposed to sacrifice one in such an experiment.

The mode of relieving the patient next claimed our attention. Although he was comparatively free of pain and had no fever, yet a condition so favorable could not be expected to exist much longer, with such a foreign substance imbedded in structures bearing relations so important to each other. Owing to the immobility of the catheter by any sort of manipulation and the obliquity of its axis to that of the urethra, it was thought to be almost impossible to extract it through that canal. At all events, not being able to make an effort, for want of suitable instruments, we decided at once to open the urethra and effect its extraction in that way. The point selected was just in front of the bulb. The patient was now placed in the usual position for lithotomy, and an opening made in accordance with Prof. Syme's plan of "perinæal section" in the treatment of stricture.

The staff being withdrawn, I next endeavored to seize the end of the catheter with a pair of strong forceps and bring it through

the opening; but in this I failed, owing to the fact that I could not get a finger hold on it. Finding this mode of procedure would not do, I now got a grooved director beneath its end, and after many efforts succeeded in lifting it out.

The patient having stood the operation very well, was now put to bed and a catheter secured in his bladder. Not expecting to see the case again, instructions were given that the instrument remain in the bladder three or four days, then, if necessary, to be removed, cleansed, returned and allowed to remain several days longer.

I heard nothing more of the case for several weeks. I was then told that the patient had entirely recovered from the operation, as well as the false passage.

I have since understood, that shortly after this very favorable result, an urethral fistula formed just in front of the scrotum or at the point where the penis hangs off from the pubes, attended with swelling of the scrotum and one of the testicles. At first, I was somewhat surprised at this occurrence; but upon learning the catheter had been worn up to this time, I was satisfied that sloughing was caused by the protracted presence of the instrument at that point. However much this circumstance may have been regretted, it is nevertheless gratifying now to know that the patient is able to be about, and has the prospect of a speedy and permanent recovery.

Remarks.—Thus have I endeavored to give the minute details of this case, the particulars of the treatment, the result, &c. I have been induced to do it for the simple reason that I have not been able to find another just such a case on record. The only one approaching it in any respect, is the case reported by Fardeau, to which allusion is made by Gross.* In this instance, an iron wire, something over seven inches long, pierced the membranous portion of the urethra and became fixed in the inner edge of the tuberosity of the ischium. Now, in my case, the false passage, considered apart from the breaking of the vulnerating body, possesses comparatively little interest. Such accidents are of rather frequent occurrence, and some varieties of which are almost necessarily followed by consequences far more alarming than we even had any right to expect from the nature and extent of the injury. For example: when it is made by an instrument leaving

* His work on the Urinary Organs.

the natural channel and reaching the bladder through the substance of the prostate gland, or passing between this gland and the rectum into the bladder, or perforating both the rectum and bladder, all of these accidents are said to have been met with. There being a direct communication with the bladder, infiltration of urine, with all its evil consequences, would, it seems, be unavoidable in every instance. Whether the proper course was pursued as regards the treatment of this case, or not, the result shows for itself. So far as the operation is concerned, it was entirely successful. The urethral fistula was doubtless caused by the protracted and unnecessary use of the catheter, and therefore should not have any importance attached to it in estimating the judicious management of the case.

ARTICLE XXXIX.

Case of Extensive Fracture of the Cranium. Noted by EVAN B. WOOD, M, D., of Dallas, Paulding county, Ga.

Sept. 1st. Was called to see Mr. T. G., who had received a blow on the left side of the head, with a black-smith's large hand-hammer. Found him prostrate upon the shop floor; perfectly insensible; his head bathed in blood and the pulse scarcely perceptible. Ordered a room at the hotel, and directed him to be carried there immediately. After removing the hair and blood, found the scalp cut through by the sharp edges of the hammer, and rupture of the posterior branch of the temporal artery; but the loss of blood was small. There was also a semi-circular fracture of the parietal bone, situate about one and a half inches above the squammous border of the temporal bone; the upper portion or apex of which was driven in upon the brain. There were also two fissures, extending from the upper portion of the fracture, one in the direction of the coronal and the other in the direction of the lambdoidal suture. There was effusion into the eye opposite the wound, completely closing the eye and giving to the lids a dark, shining appearance. Applied a simple compress, to arrest the hemorhage; ordered frictions with warm water and vinegar, and rested for the period of reaction, without further treatment—as it could not be ascertained to what extent the brain was suffering. During the first part of the night reaction supervened, accompanied with oc-

casional spasmodic or disorderly movements of the extremities, and deep groaning and restlessness.

I should have stated that the subject of this case had drank brandy to the extent of intoxication before he received the blow. After reaction was completely established, the brain still suffering from compression, an operation was deemed necessary. At the request of friends, Dr. James K. Cotten was sent for in consultation. There was partial paralysis of the tongue, superior and inferior extremities, on the side opposite the wound, as is usual. But what was the more remarkable in this case, is this: there was complete paralysis of the nerves of common sensation supplying the tongue; also, paralysis of the nerves of motion supplying the side of the tongue opposite the wound, while the nerves of special sensation of the whole organ remained perfect. There was also paralysis of the nerves of motion of the superior extremity, while the nerves of sensation were but little impaired; and partial paralysis of the nerves of sensation of the inferior extremity.

Sept. 2d, 9 A. M. Dr. Cotten having arrived, and the operation decided upon, it was immediately performed, and was attended with much pain, but followed by decided improvement in the spmptoms. Ordered sulph. magnes., and the application of cold water to the head and effused eye. 7 P. M. Found him perfectly quiet; inclined to doze; gave no signs of any pain at all. Ordered the treatment to be continued.

3d. A. M. Found him very restless; pulse full and strong; has some pain in the side of the head, opposite the wound, which he indicated by signs, for he could not articulate a word; had slept but little through the night; no alvine discharges yet. Ordered tart. emet. combined with the sulph. magnes., repeated until free discharges from the bowels were procured; and the cold water applications to be kept up continually. 7, P. M. Pulse full, strong and bounding; face flushed and temples throbbing; most intolerable pain in the side of the head opposite the wound; had only scanty evacuations from the bowels during the day. Bled him freely from the arm, and ordered the tart. emet. and salts to be continued, with the cold to the head.

4th. A. M. Found him quiet; pulse full, but soft; had copious evacuations from the bowels in the early part of the night, and slept soundly afterwards; has but little pain in the head; appears to be more rational this morning. Ordered Seidlitz powders, and cold to the head. 7 P. M. Pulse full and strong; skin dry and

hot; much thirst; great pain in the whole head; countenance flushed. Bled him again freely from the arm, and ordered tart. emet. combined with a small portion of calomel, to be repeated every three hours through the night, and cold to the head.

5th. A. M. Found him perfectly quiet; pulse full, but soft; but little pain in the head; rested very well through the night; appears quite rational this morning; makes signs for nourishment; endeavors to talk, but cannot utter a word. Ordered Seidlitz powder and tart. emet., with cold to the head. 7 P. M. Pulse excited; pain in the arm and shoulder of the paralyzed side. Took blood from the arm, and ordered morphine and tart. emet., with the cold water dressing.

6th. A. M. Much improvement this morning; had a good night's rest; pulse nearly natural; mind very good, but the paralysis remains unimproved. Ordered nothing but the cold water to the head. 7 P. M. Pulse a little excited; some pain in the head, and the shoulder of the paralyzed side. Ordered frictions with stimulating liniment to the painful shoulder and arm, and salts and tartar to operate on the bowels, and the cold water continued.

7th. A. M. Is not so well this morning; had a bad night's rest; the pain in the paralyzed shoulder and arm has been most intolerable during the night; pulse a little excited; considerable pain yet in the affected shoulder and arm. Ordered the salts and tartar and the cold water continued. 7 P. M. Pulse yet a little excited; much pain in the affected shoulder and arm. Took a few ounces of blood from the arm, and directed a full dose of morphine, and frictions to the shoulder and arm with strong liniment, and the cold water to the head.

8th. A. M. Much improved this morning; pulse very good, and the appetite decided; very little pain any where; makes signs to be carried home. Ordered nothing but the cold water applications. From this day the case progressed favorably, without any other treatment than the application of cold water, and an occasional cooling laxative, and frictions with liniment to the shoulder and arm.

On the 12th, he began to articulate a few simple words, and to move the fingers of the paralyzed hand, and on the 15th I discharged and sent him home, a distance of three miles, without any unfavorable symptom resulting. He recovered completely, save a difficulty in his articulation.

Remarks upon the Medicinal Properties of the Blackberry Root (Rubus Villosus). By CYRUS S. SNEED, M. D., of Culloden, Georgia.

I propose giving you a brief account of the Rubus Villosus (Blackberry), a medicinal agent, which has been employed very extensively in domestic and popular practice, and with great success in a variety of diseases. I am well aware that it has been long known as an excellent remedy for disorders of the bowels, and trust that the profession will not deem it presumption in me to say, that it is an error to suppose that its usefulness in those affections depends principally upon the tannin it contains.

According to Dr. Eberle, the root is considered a powerful astringent. The sulphate of iron converts the infusion and decoction into a dark purple, thereby producing a copious precipitate. Gelatin produces a white and opaque precipitate which is insoluble in water. According to those who have treated of its virtues as a medicine, its curative effects (in bowel disorders) have been attributed mostly, if not altogether, to the tannin existing in it; but upon a thorough examination of the matter, from recent experiments, I am fully satisfied that its most powerful effects are attributable, in the above diseases, to the bitter stimulant or tonic extract, distinct from its astringency, the latter having no more effect than ordinary vegetable astringents. In order to obtain this extract separate, the root when taken from the earth should have its bark immediately grated, and cold water applied to it. Like a great many other vegetable astringents, in this process tannin is retained in the bark, whilst the latter principle is extracted by the water. The fluid changes its colour to a light yellow, and to the taste it leaves a bitterness, with the slightest degree of roughness. A small quantity of this fluid, taken into the stomach, increases the appetite, and at times, I find, produces a glow over the surface of the body, which induces me to believe that its therapeutic action is stimulant, rather than tonic, as stated by most authors.

I have found this preparation to produce some of the most extraordinary cures in chronic diarrhœa and dysentery, and even in cases where all other remedies failed, and in the shortest possible time. It has a decided advantage over the astringent preparation, in all chronic cases, which should be used with the greatest caution, lest, by suddenly checking the discharge from the intestines, anasarca be produced. The preparation should be given in small

doses, five or six times a day. There is hardly any danger of its producing costiveness.

Epilepsia Miasmatica. By R. R. McMeens, M.D., of Sandusky, O.

Under the above appropriate nomenclature I propose describing one of the peculiar and protean forms of disease, obviously emanating from, and directly dependent upon, malarious effluvia. Some doubts have been entertained, by eminent writers, in regard to the probability of miasmatic exhalations, etiologically engendering or essentially establishing the pathological condition necessary to the production of true epileptic convulsions; implied from the want of adequate uniformity, in a sufficient number of cases, to corroborate or confirm the fact.

From a succession of remarkable and interesting instances eminently illustrative of such an innovation, concomitantly occurring, under my immediate inspection, exhibiting all the pathognomonic phenomena of epileptic paroxysms, uncomplicated with other prominent derangement or subsequent cerebral depravation—periodically produced and promptly eradicated by the administration of anti-periodics; together with occasional isolated cases of a similar character, observed in proximity to paludal localities; strongly substantiated the practicability of such influences, propagating a concatenation of functional and sensorial perversion, sufficient for the consummation and possible perpetuation of an epileptic habit.

During the prevalence of our ordinary autumnal epidemics, a manifest predisposition or constitutional incorporation of morbific matter is contracted; ostensibly pervading, assimilating with, and conspicuously characterizing, all succeeding determinations or developments of disease, however induced or provoked, and frequently subverting or presenting indications of paramount importance in the successful management of the case.

This innate disposition, or malarious diathesis, undergoes a marked modification upon the accession and during the progress of winter; decreasing in activity and potency, becoming ambiguous and obscure, and eventually degenerating into an asthenic; latent and indefinable deterioration of general and local innervation, resulting in occasional exhibitions of anomalous neurotic and functional disorders, difficult of diagnosis and obstinate of cure.

While this constitutional contamination continues a preternatural susceptibility to the invasion or induction of disease exists, and any combination of circumstances or particular eligibility, contribute to predilect and promote the subsequent demonstration; and accordingly, from the preponderance of cerebral and nervous development and impressibility in children, a proportional determination to that organ and system predominates; and when, from the presence of this deleterious influence, and undue exaltation or erethism is already excited; but little adaptation or concentration

is necessary to produce a degree of cerebro-meningeal irritation or excitation, adequate for the full development of an epileptic convulsion. Three of the cases I shall present in elucidation of this fact were attending the same school at the time assailed by this affliction, when the brain would necessarily be disproportionally exercised, and who were considered the most precocious and assiduous of the class, and in whom no hereditary proclivity could be ascertained.

In submitting a detail of the following cases, I shall confine my remarks to a brief delineation of symptoms and effects, observed and recorded at the time.

Case 1. On the second day of March, 1847, while practicing at St. Clair, Michigan, I was hastily called, about eleven o'clock in the forenoon, to see a little girl, twelve years of age, who had suddenly fallen from her seat in a fit, while at school, and on reaching the place, found her reclining in the arms of a neighboring woman; the violent convulsions having partially subsided, irregular muscular contractions occasionally occurring, with distortion of features, grinding of the teeth and frothing at the mouth; perfectly insensible, and apparently comatose; livid lips and rigidly flexed thumbs; spasmodic inspirations, and irregular and intermitting pulse. Having ordered an immediate removal to her residence, the ordinary paliatives were applied; after which she sank into a deep and undisturbed slumber of nearly an hour's continuance, when she suddenly awoke, with the confused and astonished expression and stare, characteristic of epilepsy, which I concluded to be the nature of the case, and designed to treat accordingly. Advising a further repose, I left, with the promise to return in the evening, at which time I found her quite recovered, having experienced no febrile reaction of any consequence, and had a warm, profuse perspiration during sleep. Left a mild cathartic, to be taken at bed-time. Next morning found my patient apparently well, and employed in her usual amusements. Enjoined an absence from school, and promised a preventive course of medication; but about eleven o'clock the next day was hurriedly called, and informed that my patient was in another paroxysm. This I found to be precisely similar to the previous attack; and, upon inquiry, learned that she had been seemingly well until a short time before seizure, when she complained of a slight sense of chilliness and uneasiness, and immediately went into a convulsion; and, on further investigation, discovered that she had suffered, the previous autumn, from a persistent intermittent fever.

From this fact, connected with the prominent periodicity and profuse perspiration, inferred the affection to depend upon malarious influence. Prescribed a dose of calomel and carbonate of iron, to be followed, next day, by the continued use of quinine and strychnine, combined in solution. On visiting her again, at the period of the anticipated recurrence, found her complaining of cold toes—numbness of the feet and hands, with an uneasy and un-

pleasant sensation of the lower extremities, closely allied, in description, to the Aura Epileptica; a slight degree of vertigo, and an expression of alarm and anxiety: all of which symptoms disappeared without further disturbance, and terminated in a quiet sleep and perspiration. The same medicine was continued for a proper length of time, and she never experienced a return of the paroxysm during the subsequent four years that I remained in the place—enjoying uninterrupted good health, and became a finely formed and fully developed girl.

Case 2. A handsome, intelligent and active little boy, seven years of age, attending the same school, on the eleventh day of the same month, complained of feeling cold, and was permitted to approach the stove, where he shortly fell upon the floor in a severe convulsion, creating great consternation among the scholars, who immediately apprized me of the fact. On examining the case, I found it resembling in almost every particular the one previously described, and which disappeared in much the same manner. The same treatment was accordingly adopted. Upon the second succeeding day, a like disposition manifesting itself, about the same hour, I was at once sent for, and found my little patient extremely excited, vociferously talking, impulsively screaming, and at times, crying out from an apprehension of some imaginary danger complaining of an exquisite sensitiveness of the hair and scalp, upon the crown of the head. After the administration of a Dover's powder, he became quiet—slept, and perspired freely, and awakened feeling comparatively well. The medicine was continued, and the disease disappeared, without any return, in the same length of time as stated in the former case.

Case 3. A spare, sallow and sickly looking girl, fourteen years of age, complained of a sense of chilliness, and approaching illness, while confined in the same school on the 21st of the same month, and was advised by the teacher to return home, the distance being but a few rods, which she did; on reaching her house, she was affected with dizziness and occasional blindness; repaired to her bed, and immediately convulsed. I was directly called, and found her insensible; teeth rigidly flexed; eyes staring and distorted; fingers firmly flexed; slow and rattling respiration; head twisted to one side; lips blue and puffed, covered with foam, issuing between her teeth: directed a stimulating foot-bath, applied ammoniæ to the nostrils, and a mustard cataplasm to the præcordia. After a short time she relapsed, and vomited a quantity of bilious secretion; after which I gave her ten grains of calomel, and she shortly went to sleep, and remained so for some time, attended with a free and general perspiration. The same course of treatment was pursued as in the former cases, and she eventually, after two or three slight periodical returns, entirely recovered; but owing to the consecutive character displayed by these cases, speculative curiosity was excited in the community, and the school dismissed. The house was located directly upon the elevated margin

of a shallow swale, which ran diagonally across the commons, to which I attributed the complaint—called into action by the influence of an advanced season.

Coincidental with the foregoing cases, I visited a child in the suburbs of the town, similarly afflicted. From this time until the fall of 1849, when I left that region, I witnessed no more instances of the kind, but subsequently locating in Sandusky, I met with three cases of a similar character, one of which differed in no particular from those above related. The other two, so closely allied in nature, yet presenting peculiar features and consequences, demand a faithful relation.

Case 4. In the month of March, 1853, I was called, at an early hour in the morning, to visit one of our most respectable, energetic and assiduous attorneys, of a marked nervo-bilious temperament, and was informed that he had passed a harassing and sleepless night, from an inordinate mental activity and excitement, and an irresistible disposition to voluble loquacity, which was continued incessantly the greater part of the night, and ceasing only upon encroaching exhaustion inducing sleep, which was attended with a profuse and debilitating perspiration. I found him languid, and tongue slightly furred; pulse soft, but accelerated; dull headache, and slight pain and uneasiness in the lumbar region and extremities—prescribed the blue mass and hyoscyamus in pills, and enjoined quiet. Was re-called about eight o'clock the same evening: found him extremely excited, vehemently discoursing upon different subjects, but perfectly rational in all his replies to my interrogatories, attributing his excitement to arduous duties undergone during a protracted sitting of a court. Informed me that it had recurred upon the same hour as on the preceding night, accompanied with a corresponding sensation of chilliness, in the extremities and back, succeeded by peculiar uneasy numbness; surface cool, pulse rather frequent, and an increased flow of saliva. From this intelligence, apparent periodicity, and the fact of having attended him the previous autumn, in an attack of pernicious intermittent fever, I administered a full dose of Dover's powder for the night, under which he slept and perspired freely, and ordered regular and free doses of quinine, strychnine and morphine, in combination, the following day, and he passed the period of recurrence with only a slight manifestation, after which he experienced no further effects. This was evidently cerebral excitation, induced and periodically sustained, by malarious influences approximating in vigor and effect, the same action as resulted in epileptic convulsions with the former cases.

Case 5. A male child about three years of age, the son of one of our most respectable and influential citizens, apparently healthy, and robust in conformation, was attacked with an active intermittent fever in the autumn of 1851, which was arrested by ordinary means, without any difficulty, or unusual appearances, but returned sometime after as a masked intermittent, which was also readily

relieved, and from that time enjoyed good health until about the first of April, of the succeeding spring, when he one day complained of chilliness and other slight symptoms of illness, which was presumed to result from out door exposure, which had been permitted, but on the second day succeeding, was again affected in the same manner, which eventuated in a severe convulsion, so closely resembling epilepsy, as to create great alarm and anxiety in the parents, from the fact of a brother, on the father's side, being subjected to epileptic attacks, for a number of years. From a knowledge of his previous affection—the assumed periodicity—and similitude to the cases detailed, the same diagnosis was consequently deduced, and the same mode of treatment adopted, and like favorable results obtained. He passed the summer without any return of the disease, but late in the autumn was again subjected to chills and paroxysms, attended with prominent gastro-hepatic derangement at first assuming a tertian type, but subsequently an erratic and irregular development. I hereupon adopted a methodical course of treatment, by successfully administering citrate of quinine and iron, oxide and valerianate of zinc, combinations of narcotics and restricted diet, and eventually nitrate of silver, correcting visceral derangement by occasional doses of calomel and carbonate of iron. The paroxysms again subsided during the continuance of winter, but again reappeared upon the ensuing spring, premonished by the former gastric disturbances and ejection of bile, but with diminished febrile reaction, and longer protracted convulsions, and began to manifest some of the appreciable evidences of confirmed epilepsy; as impediment of speech, slight strabismus, irrascible temper, immoderate activity, and capacious appetite, but again passed the summer without a relapse. At this period he was seen by the late Dr. Dresback, of Tiffin, whose acknowledged experience and practical suggestions I was desirous of obtaining. He considered the case as one of simulated epilepsy, depending on and resulting from miasmatic influence and concentration, and prognosticated a favorable termination, and entire exemption by proper treatment and care—advised a sojourn to the sea coast, during the autumnal season, which was complied with. He also informed me, that he had met with similar cases in his own practice, and one presenting more untoward indications than this one, and which eventually entirely recovered. Such cases possessing a favorable tendency, instead of the intractable deterioration of essential epilepsy.

This patient escaped any violent manifestations of relapse during the autumn of 1853, which was passed at an eastern resort upon the coast, and only displayed some occasional vertiginous disturbance on his return, which were usually excited by error in diet, or under exercise and fatigue. Early in the spring of 1854, the family removed to Cincinnati, where, through my recommendation, he passed to the professional care of Dr. Mendenhall, to whom I communicated the history of his previous condition

and under whose management he much improved, and I believe had no relapse of paroxysms, and who I learned placed him upon the continued use of stramonium, and regulated diet.

In this case there was an evident hereditary predisposition, as communicated by the family, two or more instances having occurred in their ancestors, but was unquestionably called into action, sustained, and probably perpetuated, by the direct influences of miasmatic poison.

I offer the foregoing cases and considerations, without any desire to complicate the causes, or nomenclature of the disease, but merely to state the fact, of such a character of the disease existing, having never met with any notice, or account of the affection, in medical publications; one striking feature as yet unnoticed, is the fact of the vernal predilection observed by the cases narrated, which probably depends upon the character of the zymotic elements, eliminated and set free by the revivifying influences of spring.—[*Western Lancet.*

On a New Method of Treatment for Otorrhœa. By JAMES YEARSLEY, Esq., M.R.C.S., Eng., Surgeon to the Metropolitan Ear Infirmary.

To the Editor of THE LANCET:

SIR,—As the enclosed paper is a continuation of the subject of papers which appeared in the The Lancet of July, 1848, I shall esteem it a favour if you will kindly permit it to have the advantage of the same medium for circulation amongst the profession.

I am, Sir, yours very obediently,

JAS. YEARSLEY.

It would be contrary to experience, as evinced in the history of almost every discovery, were the advantages deducible from it to be at once either fully developed or duly appreciated. When in 1848, in this journal,* it was my good fortune to introduce a mode of treatment capable of alleviating so materially certain cases of deafness previously deemed beyond the reach of our art, and that by one of the simplest of remedies, it could scarcely have occurred to me that this very practice would, in its turn, lead to an improved method of treating that very troublesome affection, otorrhœa—an affection which has so frequently baffled the best directed and most persevering efforts of medical practitioners.

In the present, as in the former case, the agent by which such results are accomplished is so simple, and seemingly so inadequate to the end, that nothing short of the most irrefragable and conclusive experience could suffice to convince me of the value of the method, and the superiority it possesses over the uncertain and

* See The Lancet, July 1848; and "On a New Mode of Treating Deafness, &c.," pamphlet, Churchill, New Burlington-street.

precarious modes of treating otorrhœa by injections hitherto in use; nor will it be less surprising when it is added, that it is neither more nor less than a modification of the remedy already introduced to the notice of the profession for the alleviation, if not for the cure, of all those cases of deafness that arise from partial or entire loss of the membrana tympani—namely *cotton wool.*

But what I have just stated regarding this new mode of treating otorrhœa, does not comprehend, by any means, the only advantage derivable from its employment, for its value is not limited to the mere arrest and cure of the discharge; it has this additional superiority over the usual modes of treatment, that the sense of hearing so frequently impaired under the use of astringents, is, on the contrary, not only not diminished, but decidedly and in many cases immensely improved.

It is not denied that astringent injections containing alum, salts of lead, zinc, &c., which from time immemorial have formed a prominent feature in the routine treatment of otorrhœa, have sometimes been successful in suppressing the discharge; but how often have practitioners had reason to regret, in such cases, that in an exact ratio with their success—that is, in exact ratio with the subsidence of the discharge—has there been a corresponding diminution of the sense of hearing. In my experience this has been so manifestly the case, that for many years past I have preferred recommending patients to submit to their malady, rather than incur the alternative. I have accordingly limited the treatment generally to the mere cleansing and soothing of the ear, without prescribing the use of such means as might be supposed capable of suppressing entirely the discharge.

I had not long practised this plan for the relief of deafness arising from partial or entire loss of the membrana tympani, ere my attention was arrested by the fact adverted to—namely, the gradual diminution, followed by the entire cessation, of the discharge, which almost invariably occurs in cases where the wetted cotton is used for the purpose mentioned, and to the use of which there can be no doubt such a result is alone attributable. Frequently would some patient exclaim, with no little satisfaction, if not exultation, "Your remedy has not only improved my hearing, but the discharge, which was so offensive to me, has entirely ceased." A fact so remarkable could not fail to claim attention; and the first cases of chronic discharge from the ear that presented themselves, irrespective altogether of deafness, were made the subjects of my experiments with the cotton. A few cases, by way of illustration, will be appended.

I come now to mention the manner of applying this remedy. First of all, the passage of the ear is to be carefully cleansed by gently syringing it with warm water, and the moisture removed by means of a porte-sponge. The parts are now to be so clearly displayed by the aid of a powerful gas-reflector, that the necessary manipulations may be readily and accurately accomplished, when

I take a small piece of dry cotton—the size of which varies according to the circumstances of the case—and adjust it by gently pressing down every part of it upon the surface from which the discharge proceeds, exactly as if dressing an ulcer on any other surface of the body; this done, quiet is enjoined, restricting, as much as possible, every movement of the jaw, such, for instance, as takes place in eating and speaking. Twenty-four hours afterwards I remove this, and apply another dressing of the cotton. The importance of restricting the patient from moving the jaws will be at once manifest, if the reader will take the trouble to place the point of the finger in the passage of the ear, and read aloud the present paragraph. It will then be perceived how easily the cotton, however accurately adjusted, may be loosened and moved from its state of exact apposition. In eating, the detachment takes place still more readily, yet the patient cannot be debarred all use of the jaw, seeing he must have food; nor, if great care be taken to keep the jaws in a state of motionless apposition, need speech be altogether interdicted; but for the same reason the food should be such as to require no mastication. Doubtless no one will consider these restrictions as objections to this mode of treatment; though a more specious, but equally invalid objection to it may be raised, on the ground that the tympanum being a cavity, such a degree of accuracy in adapting the cotton to its surface, as described, cannot be attained. If the ear be examined with the admirable appliances for its illumination now at the command of the aural surgeon, it will be found, in cases where the membrana tympani is destroyed, that the extent of the surface from which the discharge proceeds, is not only exposed to view, but the cavity is observed to be obliterated, and the walls of the tympanum, red and vascular, are seen thickened and tumid, if not spongy or fungoid. I speak here more especially of the worst cases that come under the notice of aural surgeons, in the great majority of which not only is the discharge itself cured, but the patient experiences a great amelioration in the state of his hearing also. Nay, more: cases can be referred to, in which the great disorganization of the ear seemed to preclude all hope of effecting any amelioration of the hearing, yet in which, after persevering in the treatment for a greater or less period, a change has been accomplished, which could not have been confined to the fungoid tissues alone, for, in the cases I speak of, a sensible improvement of hearing has been a coetaneous result.

The successful treatment of external otorrhœa by the same simple means has been hitherto no less rapid than certain. Moreover, in nearly every case, relief of the deafness has accompanied the cessation of the discharge—a result the reverse of that which follows, almost invariably, the treatment of external otorrhœa by astringent injections. The arrest of the discharge may, indeed, by such means, be accomplished in many instances without any great difficulty; but when that has been effected, we have no great rea-

son to rejoice at a cure that has been produced at the expense of the patient's hearing.

As already hinted, I foresee the argument, based on the fact of the tympanum being a cavity with a traversing passage, that may be adduced against the treatment; but it is contended that in chronic otorrhœa, of that aggravated form, at least, of which I speak, no such cavity, for reasons already stated, is found to exist. The theorist, indeed, as in the case of the treatment of certain cases of deafness by excision of enlarged tonsils, may contend that the occlusion of the guttural extremity of the Eustachian tube is a physical impossibility; but as in that case, so in the present, facts that stand forth in bold relief are not to be overthrown by the laugh of illogical reasoners, how eloquent soever may be their mistaken efforts. What fact, in surgical therapeutics, is now better attested than the cure of deafness by the excision of enlarged tonsils? As in that instance, so now in the treatment of otorrhœa by the simple means so confidently recommended; look at the facts. It is true, the investigation of this subject is still going forward, and cannot, therefore, be considered as complete; but if any modification of what is here stated should become necessary, it must be sought for in future experience, not in that of the past.

A chronic discharge of mucus or of pus from the passage of the ear, or of mucus and pus intermingled, is usually denominated *otorrhœa*. This affection, which may be confined to the external meatus, involving chiefly the ceruminous follicles and lining membrane, or which may extend to the internal ear, when it does not originate therein, is one of the most common as well as the most troublesome affections to which the ear is liable. And not only so, but otorrhœa is usually regarded as an affection more intractable than any other to which the ear is subject; and is one, besides, which it is considered dangerous to cure, and against attempting to cure which, cautions have been from time to time addressed to practitioners by almost every writer on diseases of the ear. How far such cautions, which should have been directed against the means rather than the end, were necessary, will afterwards be seen. But otorrhœa, even when neglected, or when unsuccessfully treated, is not always a disease from which the patient experiences much suffering, for pain is by no means a necessary attendant; and cases may be met with where the discharge has existed for years—nay, for the greater part of a lifetime, yet unaccompanied all the while by any appreciable measure of pain.

Though otorrhœa may be considered generally as a purely local disease, yet practitioners there are who seem disposed to regard it as dependent more on constitutional than on local causes, and requiring for its successful treatment chiefly constitutional remedies—a view too exclusive to require any formal refutation. That in many cases otorrhœa may be modified by constitutional causes, is no doubt quite true, and scrofula may be named, especially in the young, as an undoubted example. But its manifest origin is,

in a great majority of cases, from causes that are local, and that act directly on the ear itself; the visible, consequent alteration of the tissues that takes place consisting usually in a turgid, if not fungoid, state of the lining membrane: the readiness with which both these and the discharge yield, and all vestiges of the disease disappear under the mode of local treatment now advocated, and without being followed by any of the untoward effects which we are cautioned to expect—these are all reasons which, when combined, are more than sufficient to show how little claim otorrhœa can have to be considered generally as a disease of constitutional origin. That an affection so little amenable to the modes of local treatment usually had recourse to should, in the end, come to be looked on as one of constitutional rather than of local origin, admits of a ready explanation; but beyond constitutional states that may be coincident with this, as they may be coincident with any other local disease, I can see no ground for making any such exclusive admission in favor of otorrhœa.

They who regard otorrhœa as a disease of constitutional origin, no less than they who consider it a merely local affection, seem alike imbued with ideas of danger that may arise from attempts to suppress, by topical applications the discharge. Examples of danger arising out of such practice are, indeed, not unknown, and deserve the attentive consideration of all who undertake the treatment of aural diseases. But the danger, when danger occurs, arises not from obviating the *disease*—that is, the morbid alterations of structure, which, indeed, such treatment professedly does not attempt to do—but from the too energetic use of astringents, through which only the prominent symptom of the disease, rather than the disease itself, becomes possibly suddenly suppressed. It is obvious, however, that were the diseased state of the parts to be first of all remedied by means, simple or complex, no matter what, but changed from an unhealthy to a healthy condition, then would the otorrhœa, as a necessary consequence, disappear. But how have practitioners—at least, the more incautious of them—attempted to get rid of the discharge? Not always, certainly, in the manner we would indicate. On the contrary, every one knows that injections, containing salts of lead, zinc, and copper, nitrate of silver, creasote, &c., &c.,* constitute the usual routine in such cases; and though they may, as has been said, be capable of suddenly, and in a dangerous manner, suppressing the discharge, yet cannot now, after such ample and lengthened experience of their inefficiency, be supposed capable of removing that morbid state of the tissues on which the discharge depends. That danger, then, may arise to the patient under such a treatment is quite conceiva-

* Mr. Wilde, also, one of the latest writers on diseases of the ear, and who says that "this disease is always tedious and difficult," recommends "the various salts which enter into the general decomposition of eye collyria" as being "here particularly applicable, especially those of alum, lead, zinc, and copper."—Aural Surgery, p. 410, 1.

ble, and it is a source of unfeigned satisfaction and pleasure to me to be able to make known a mode of treatment as safe in all such cases as it is efficient, by which the usual mode of treatment, accused of being so hazardous, must soon, and I hope forever, be superseded. My treatment will thus do away with all ground for non-interference with this discharge on the pretext of danger, as well as remove every reason for counselling submission, on the part of the patient, to a loathsome discharge—a source at all times not only of disgust, but that renders the subjects thereof, so long as it is allowed to continue, peculiarly liable to aggravation of their malady from all those influences that have been mentioned as occasional causes of this disease.

Miss L——, pupil in the establishment of Miss Hurst, St. John's Wood, became my patient in June, 1854, suffering from a most disagreeable discharge from the right ear, which was left as one of the sequelæ of scarlatina several years ago. Considerable deafness attended the case, which varied with the state of the discharge, being greater when the latter was least abundant. On examination, a small perforation existed in the membrana tympani, below the insertion of the malleus; and the walls of the meatus, near to the membrane, presented a vascular appearance, approaching to a state of semi-ulceration. Contenting myself with cleansing the meatus, by carefully syringing it out with warm water, I directed her to apply a poultice, enclosed in a linen bag, to the side of the head, including the ear, for two nights in succession, and then to visit me again. At the second visit, the irritable appearance of the meatus had subsided, and I proceeded to adjust and impact a small piece of dry cotton at the bottom of the meatus. From day to day the same treatment was employed for upwards of a week, by which time all discharge had ceased. It was my wish to continue the application for three or four days longer, but arrangements had been made for her return to her friends for the holidays, which could not be overruled. As I feared, the result proved that the treatment was too early discontinued; for in six weeks she returned as bad as ever. This time she was instructed by her friends to attend me until the cure was complete; and this was happily effected in a period of three weeks. The discharge entirely ceased, and the hearing was perfectly restored. On examination of the membrane, no appearance of perforation remained.

W. W——, foreman in the establishment of Messrs. ——, became a patient of the Metropolitan Ear Infirmary, January, 1855, suffering from otorrhœa of some months' continuance, accompanied by a considerable degree of deafness. It appeared to me to be a very favorable case for the new treatment, and he was desired to attend me daily for the purpose of trying it. The cotton was accurately adjusted, and from day to day it was replaced by a new piece. Every application was followed by an improvement, and the patient invariably spoke of the great "comfort" he experienced from the remedy. In one week all discharge had ceased,

and his hearing was better than it had been for years. In this case both membranæ tympanorum were entirely absent; still there was no appearance of an open cavity. The walls of the tympana were fully exposed to view, and the patient could "whistle" through the ears. Under such circumstances, so rapid a cure could not have been expected. I had the satisfaction of hearing from this patient that, many years ago, I had entirely cured his son of an extreme deafness by excision of exuberant growths from the tonsils. The lad, now a grown man, had been entirely restored to hearing by the operation.

Miss ——, the daughter of a surgeon in the North, favoured me with a visit on the 10th of January, bringing with her an introductory note from her father, from which I extract the following brief history of her complaint:—"When she was about five or six years of age (she is now twenty) she had a severe attack of scarlet fever, during which her ears began to discharge; and, on becoming convalescent, I was grieved to find her hearing affected. Except keeping the ears clean by the daily use of warm water (injected), I did nothing, and scarcely have done anything more ever since, although occasionally urged to do so by several of my medical friends. You will find the membranæ tympanorum more or less gone in both ears. Her general health is uniformly good. She hears very fairly on one side, but very imperfectly on the other. I have thought the case a favourable one for the cotton wool, as advised by you some years ago," &c., &c. All this I found verified, on examination, with the exception of not finding the membrane perforated on the right side, though it had evidently suffered damage during the fever. The discharge existed only on the left side, and to that I directed my attention. The passage of the ear was tumefied and contracted, so that the cotton remedy could not be applied with effect. I therefore set to work to cure the discharge by my new method, trusting that, if successful, improved hearing also would be experienced by my patient. Day after day the dry cotton was applied, with a gradual improvement certainly, but still with only partial success. The tumefaction, however, diminished, and the calibre of the passage was proportionately increased. One day my patient reported to me that she had experienced a sensible improvement in her hearing, and she herself suggested another trial of the moistened cotton. This was done, and with a decided improvement in hearing, so that from this time the treatment of the discharge was a secondary consideration, and I proceeded to teach her how to apply the moistened cotton, which is now followed up with daily success, the discharge ceasing as a matter of course. The great impediment to the suppression of the discharge in this case, by the impaction of the dry cotton, arose, I suspect, from the free passage of the Eustachian tube, along which the discharge in the tympanum freely travelled, of which my patient was frequently and most disagreeably made sensible.

Mr. W——, surgeon in the navy, who had just received orders to hold himself in readiness to proceed to the Crimea, consulted me in December last for disease of the left ear, attended by a loathsome discharge. On examination, I discovered a small fleshy excrescence growing from the surface of the membrana tympani, which was very much disorganized, without any apparent perforation, though it seemed as if such a condition had at one time existed. The hearing was greatly deteriorated; but having the sense perfect on the opposite side, he was but slightly inconvenienced. The discharge, and a sense of oppression on the affected side, were the chief sources of complaint. I explained that it would be nccessary first to remove the fleshy excrescence, and that then I should proceed to relieve him by my new mode of treating cases of otorrhœa, and that such treatment would require his daily attendance for several days in succession.

At that time it was inconvenient to him to remain, and he returned to his duties at the Royal Naval Hospital at Deal, until he could make arrangements and obtain leave of absence for about a fortnight in town. In the interval he was one day exposed to a cold, piercing, easterly wind, and wishing to protect the diseased ear, he pushed into the passage of it a piece of dry cotton, of which he took no further notice. On the 10th of January I received a note from him, to say that he had obtained leave of absence, and would visit me on the following day, which he did. On examining the ear, I said, "Why, what have you got in your ear?" "Nothing; I have done nothing to it." "Oh yes, you have," I replied, at the same time withdrawing from the ear a dry piece of cotton, which had evidently been impacted there for several days. Again applying the speculum, I remarked: "The fleshy excrescence has disappeared, and you have unintentionally cured yourself of the discharge. You have absolutely cured yourself upon the principle of treatment of which I told you at your last visit. The piece of cotton I have just extracted has by some good luck been pushed down upon the seat of disease; its pressure has dissipated the excrescence, and with it the discharge has vanished." His astonishment was succeeded by an immoderate fit of laughter, which was thus accounted for: A surgeon had examined his ear the day previously, and said, "Oh yes, I see the fleshy growth quite plain: Mr. Yearsley will have no difficulty in removing it!" So much for the opinion of surgeons unaccustomed to see diseases of the ear. The gentleman alluded to could only have seen the pellet of cotton-wool. But more experienced surgeons than he may be deceived in regard to disease in the passage of the ear. I remember once to have removed a polypus from the ear of a young lady, the existence of which had been denied by two of the most eminent surgeons of the day.—[*London Lancet.*

Practical Remarks on Strabismus; with some novel suggestions respecting the Operation. By G. CRITCHETT, Esq., F.R.C.S., Surgeon to the Royal London Ophthalmic Hospital; Lecturer on Surgery at the London Hospital, etc.

It is now about sixteen years since the first operation for strabismus, so philosophically suggested by Stromeyer, and so boldly executed by Dieffenbach, was performed; it was hailed as a great discovery, and excited an unusual amount of eagerness on the part of the members of our profession, and persons afflicted with this deformity became suddenly objects of interest and even solicitation. Thousands have been operated upon with various results, but it still admits of doubt whether the aggregate symmetry of those afflicted with this deformity has been increased, and whether the impression left upon the public mind, and even on that of the profession, is not rather unfavorable to this operation. I think it will be both interesting and instructive to the members of the profession, to endeavour to point out how far there exists any legitimate ground for these unfavourable impressions, and how far the present defects of the operation admit of improvement. Very soon after the importation of this novel and ingenious proceeding into this country, the literature of the profession on this subject was suddenly and copiously supplied, but it was evident that some wrote rather for than from practice, and that in every case the experience was too limited, and the time for observing subsequent results too short, and the mental bias in its favour too strong to admit of a calm and satisfactory verdict upon the merits of the operation. Now that many years have elapsed, that vast numbers have been operated upon, that enthusiasm has cooled down, and that comparatively few cases remain, we are able to approach the subject in a more philosophic spirit, and fairly and impartially to discuss the merits and demerits of the operation. As my object in this paper is chiefly practical, I do not propose to travel over the difficult and often discussed question of the pathology of strabismus, but only to glance briefly at a few points that seem to bear upon treatment.

Much has been said about the importance of determining which is the defective eye in any given case, and rules have been laid down for ascertaining this point. The truth is, that in almost every case both eyes are equally implicated in the abnormal position; for although one may be habitually inverted and the other straight, yet if the strabismic eye be brought into play, it assumes a normal condition, and moves in obedience to the will, and the other eye, if suddenly uncovered, will be found precisely in the position that the diseased eye usually assumes; and I have proved over and over again that as favourable result is obtained by operating upon one as the other. The fact is, that in strabismus the two eyes start from different points; both respond to the effort of the will, and each is found, when examined separately, to move

equally well in every direction. The disease is, therefore, rather relative than positive. Practically I endeavor to find out which is the eye that is habitually inverted, and for this purpose I test the relative power of vision in the two eyes, and I select for operation the one presenting this peculiarity. But in the alternating form of this disease it is quite immaterial which is done, and in any case the result would be the same as regards the removal of the deformity; but the defective eye is selected in the hope of benefiting its vision simultaneously with its position.

The first point that impresses itself upon the mind of an extensive and careful observer is, the extreme variety of causes to which the disease is attributed; but when these are analyzed and grouped, they may be arranged under three heads:—first, where the origin of the nerves is affected through the brain and spinal cord, as in cases following convulsions, fevers, &c.; secondly, where irritation is propagated from extremities of nerves, as in cases following injuries, ophthalmias, &c.; thirdly, from morbid volition, as in cases resulting from irritation, from temporary excitement, &c. In investigating the causes of strabismus, we find a very close analogy between this disease and talipes. Another circumstance, equally conspicuous and more embarrassing, is the numberless shades of difference in the degree of departure from the normal position, whether it be inversion, or, more rarely, eversion, or, still more rarely, undue elevation or depression. In extreme cases, we find that when one eye occupies a central position the other is so far drawn into the corner, that about half the cornea is concealed by the folds of the caruncle; in slight cases the departure from the central axis is from half a line to a line, and between these two extremes there is every shade of difference. The same may be said respecting diverging strabismus; but the third variety—viz., that in which either the superior or inferior rectus is involved, is never found in an extreme degree. Again, we find that the condition of the sight is very different in cases that are in other respects apparently simple. The rule certainly is, that in cases of habitual strabismus of some years' standing the function of the organ is impaired; but I have met with several well-marked cases in which the sight has remained perfectly good, and with others in which the degree of impairment of vision has varied considerably, some being able to read large print, others being scarcely able to distinguish features, or even large objects. In the alternating form, vision is almost invariably found to be equally good in both eyes; and these varieties exist without any obvious change in the appearance of the eye, either as regards the condition of the pupil or of any of the transparent media, such as may generally be observed in amaurotic cases. It is quite possible that the ophthalmoscope would reveal changes in the retina and choroid in some of these cases, but I have not as yet had opportunities of observing a sufficient number to speak with any certainty. It has been said that the power of the external rectus, and consequently

of eversion, varies considerably, as evinced by the extent to which the eye can be acted upon by this muscle; and this may be true in some cases, but it must be received with much caution, particularly where the strabismus is extreme, because the limit to eversion of the one eye depends upon the other having reached its utmost extent as regards inversion, and consequently the voluntary effort as excited in both eyes has reached its extreme boundary.

In considering the question of treatment, I propose to limit my remarks exclusively to operative proceedings, never having been able to trace any advantage from any other plan, after the deformity has existed any time. The operation that has usually been practised for the removal of this deformity has consisted in the free division of those parts attached to the inner surface of the globe, including conjunctiva, sub-conjunctivial fascia, rectus muscle, and its sheath; in fact, it was recommended by one author, that the inner surface of the sclerotic should be cleansed; if we bear in mind that this operation has been performed upon some thousands of cases, of all ages, and presenting the numerous varieties to which I have already alluded, the wonder, is that a greater number of failures have not occurred, and that a uniform procedure should have been found so extensively applicable to a condition presenting so many degrees of deformity; nevertheless this is to a certain extent true. When the eye is free from the muscle it seems, in many cases, to have an inherent and selective power of assuming the straight position. So that what seems improbable in theory exists in fact. At the same time, untoward results sometimes follow the operation, either immediately or at a subsequent period, rendering the condition of the patient worse than before. As, therefore, the motives for recommending such an operation are mainly based upon considerations respecting personal appearance, (the improvement to sight being secondary and uncertain,) it becomes a matter of great practical moment to consider what are the defects of this operation, and how far they admit of correction. The first point that strikes every close observer, even in the most favorable specimens of the operation, where the eye has assumed a perfectly normal position, and moves freely, is a certain sinking in and loss of the caruncle, so that the inner part of the globe seems more exposed than that of the opposite eye, and a fossa exists in the place of the caruncle; this, so far as my experience goes, is an invariable result of the operation, and explains the circumstance that has been often remarked, that those cases are the most successful in which it has been necessary to operate on both eyes, the double defect being less conspicuous than when one only has been divided, and is brought into competition with the natural state of the parts. Another unfavourable result that sometimes occurs, is increased prominence of the globe; this takes place usually immediately after the muscle is divided, but I have known it occur at a subsequent period, and gradually increase for a time. This, no

doubt, arises from the loss of balance of power between the recti and obliqui, the latter acting with undue power when one of the recti is divided; the difficulty is to explain why this occurs in some cases and not in others, and to indicate any sign by which a result may be predicated; and this I shall endeavour to do in a subsequent part of the paper. The most serious and damaging effect of the operation is the occurrence of eversion: this may be an immediate or a very remote sequence of the operation; and when the previous inversion has been slight, and there has been increased prominence, and an extensive reaction in the outward direction, the deformity is very great, and almost hideous: the face seems robbed of all expression—"there is no speculation in those eyes." To the patient it becomes a serious grievance; and to the operator, a kind of haunting spectral vision. I have met with cases in my own practice, and in that of others, in which the two cornea have occupied the outer angles of the lids, particularly if the eyes have been operated upon, at the same time.

There are some other minor objections to which I may briefly allude. The extensive wound in the conjunctiva heals very slowly, remains red and swollen for a considerable time, often gives rise to a fleshy growth that requires removal, and leaves a scar more or less distinct, and the power of moving the eye in the direction of the divided muscle is often quite lost, constituting in itself some deformity. In stating the case, therefore, for the old operation, there is invariably a sinking and loss of the caruncle, and a scar, usually a considerable loss of power of inversion, not unfrequently increased prominence of the globe, and occasionally eversion more or less complete, either immediately or as a remote effect, and there may be both prominence and eversion co-existent. Now, considering that the operation is undertaken and submitted to almost exclusively with the object of removing a deformity, it becomes a question whether this deformity is removed to a sufficient extent, and in a sufficient number of cases, to justify the proceeding, and whether one decided case of eversion does not outweigh a large number of what are usually deemed successful. Whatever may be the opinion of the profession on this point, I think it must be admitted that, with such defects, a wide margin is left for improvement; and that if a procedure can be suggested, in which no sinking in of the inner caruncle occurs, nor any perceptible scar remains, in which increased prominence and eversion, as far as my experience has yet gone, never takes place, and in which the healing process is complete in a week, and is never attended with the formation of a granulation, I think all must admit that a very important point is gained. Such a plan I have recently been in the habit of adopting, and it is chiefly with the view of setting forth the details of this operation that I have been induced to bring the subject before the notice of the profession.

The essential principle of the operation I am about to describe consists in the division of the muscle sub-conjunctivally. This, it

will be remarked, is not altogether a novel suggestion; it has been recommended by Mons. Guerin, and has been attempted with more or less success by several; but it has been found difficult and sometimes impracticable, in consequence of the method adopted. Thus it is suggested to draw the eye forcibly outwards, so as to render the internal rectus tense; then to introduce a small bistoury beneath the muscle, and divide it. Any one who has attempted this operation in this way, will agree with me that it is one of extreme difficulty; the loose capsule round the muscle prevents the edge of the knife from acting upon the tendon, neither can the tendon be made sufficiently tense to be thus divided. The difficulty and uncertainty of this operation has resulted in its having been rarely attempted, more rarely accomplished, and never repeated. The method that I propose, and that has been performed by myself and some of my colleagues at the Ophthalmic Hospital in a large number of cases, is the following: Having placed the patient, if nervous or restless, or very young, under the influence of chloroform, the eye-lids must be fixed open with a spring speculum, the globe may be now everted by an assistant, and the operator, seizing the conjunctiva at a point corresponding to the lower border of the internal rectus, makes a small opening with a pair of rather strong blunt-pointed scissors, he then seizes the subconjunctival fascia, and divides it to the same extent, so as clearly and cleanly to expose a small surface of sclerotic. The ordinary strabismus blunt hook, bent at a right angle, must now be swept round the globe so as to pass beneath the muscle; this may be known by the peculiar elastic resistance that is felt; the blades of the scissors must then be passed in through the opening, and by a succession of small cuts the tendon may be readily divided between the hook and the insertion into the sclerotic, and close to the latter. You may distinctly feel and sometimes hear the creak of the scissors as the tendon is cut through. Some little difficulty is sometimes experienced, when the insertion of the tendon is rather broad in reaching its upper edge, and when that is the case I make a small counter-opening in the conjunctiva corresponding to the upper border of the muscle. I introduce the hook from above, and, having passed it beneath the remaining slip of tendon, divide it with the scissors in the same direction. This counter-opening has the advantage of facilitating the escape of blood that has become infiltrated beneath the conjunctiva, and it does not in any way interfere with the principle and aim of the operation, which is to leave a broad band of conjunctiva between the cornea and the inner caruncle intact. The advantages of this plan, as contrasted with the old one, seem to me to be very great. It has, in the first place, the merit enjoyed by all subcutaneous sections, of immunity from inflammation and suppuration, and makes a very rapid and certain cure; no granulation ever forms, and the caruncle maintains its natural position, and does not shrink away into a deep fossa, as is invariably the case when the usual operation has been

performed; and as far as my experience yet goes, proptosis or increased prominence of the eye is more rare, and eversion never occurs, and the natural movements of the eye are more complete. This I attribute to the fact that the ocular fascia is but little interfered with, and that a good firm union takes place between the divided muscle and the globe of the eye.

Such seem to me to be the advantages of the mode of operating that I am now anxious to explain and recommend—advantages that are of so important a nature, that in fairly stating the case to the patient, if the old operation is contemplated, it certainly admits of doubt if the personal appearance is much improved, even in the most favourable results, and there is always a risk of increased prominence and of eversion, and it admits of a question whether it can be recommended. If, on the other hand, the mode of proceeding I am now setting forth be in contemplation, we may at least feel assured, that if the deformity is not altogether removed, it will not be rendered worse, and that in many cases the result will be so perfect, that the most experienced eye will not detect any defect, or be aware that any operation has been performed. But it may be asked if there are any objections to this operation, and any cases in which the old operation is preferable. It must be admitted that it is rather more difficult to perform, that there is a greater liability to leave some portion undivided, and that sometimes some inversion remains, in consequence of the attachment of the muscle to the fascia after it is divided from the sclerotic. This will often rectify itself afterwards, and where this is not the case, it is better either to operate on the other eye, or, if the cast is slight, be content to leave the case in that state, rather than risk eversion by further interference. It is only in cases of long standing, and where the strabismus is very extreme, and where the eye is small and deep-set, and where the sub-conjunctival operation produces but very little effect, that the old operation is justifiable.

Before I conclude this paper, I would just briefly glance at two or three points of some practical interest, having reference to the age of the patients, and condition of eye at which the operation should be performed, and to the effect of the operation upon vision.

As regards the first point, my own experience, derived from many hundred cases, is, that the most favourable results occur in young adults, as contrasted with children. Cases in which the relative position of the eyes is not uniform, and is aggravated or altered by mental or bodily excitement, and in which there is any oscillary or rotatory movements, are all uncertain in their results, and very liable to be followed by undue prominence of the globe, or by eversion, or both. On this account, I do not find operations on children succeed so well as on young adults. As regards the effect of the extent of the distortion in influencing the result of the operation, it is difficult to lay down rules. As far as my own experience goes, I should say that in most extreme cases of inversion

there is only a partial improvement from dividing one muscle, and it is a nice point to determine if there be sufficient distortion remaining to make it safe to divide the inner rectus of the other eye, without risking eversion. Unless the eye occupy a position at least midway between the inner caruncle and the central axis, it is not safe to operate. The chief causes of eversion, after the operation, are to be traced to the previous slight degree of the inversion, to the unsettled state of the disease, or to an undue division and separation of parts; and if the slightest eversion occur at the time of the operation, there seems to be a constant tendency to increase, until it has reached its extreme limits. This arises from the disadvantage at which union takes place, the power of the external rectus muscle, and the loss of the rectifying and controlling power of vision. Eversion sometimes occurs weeks and months after the operation, in consequence of the gradual stretching of the uniting medium, an analogue of which is to be found sometimes after fracture of the patella, in which very extensive separation of the two portions occurs. The very worst cases of eversion that I have ever seen have resulted from a simultaneous division of the muscles of both eyes, a proceeding that is in no case justifiable. The effect of the operation upon vision is surrounded with obscurity and difficulty. In the first place, much variety exists in the extent to which vision is impaired by strabismus; in the alternating form, both eyes are equally good; in children but little damage is done; but where the deformity has existed several years, there is almost invariably imperfect vision, differing, however, in degree in nearly every case.

In several remarkable cases that have come under my notice in my own practice, in that of Mr. Dixon, and others, a very sudden and complete restoration of sight has followed the operation. I should hesitate to assert this curious and almost inexplicable phenomenon, had I not verified the fact over and over again in a manner that admits of no doubt. Mr. Holthouse has endeavoured to explain this by supposing that the muscles of the eye-ball focus the eye, and that the operation restores this power. If this were the true solution of the riddle we should find something like uniformity of result, but this is not the case; the improvement is sometimes gradual, and sometimes no perceptible change occurs. These considerations suggest the performance of the operation during childhood, aud if the result could be made equally favourable in other respects, this would be the most desirable period for its performance, and the sub-conjunctival operation will render the usual objections to an operation at this period of life less obvious.

It will be seen that the chief object of my paper has been to describe and set forth the advantages of the sub-conjunctival operation; and it may be thought by some to have the disadvantage of difficulty and uncertainty, without sufficient counteracting advantages, particularly as it is alluded to very briefly and somewhat disparagingly by the more recent writers on this subject—Mr.

McKenzie, Mr. H. Walton, and Mr. Holthouse. After having tried it in above a hundred cases, I never now adopt the old method, and I am strongly impressed with the uniformity of the favourable result; in no case have I had increased prominence or eversion. In some cases, it is true, some amount of inversion has remained, but this occurred at least as frequently with the old operation; so that the patient is now sure of improvement from the operation, without risking the occurrence of any of the unfavourable concomitants of the old plan.

As I have mentioned in the foregoing remarks, cases of eversion, following the operation of dividing the internal rectus muscle, sometimes come before our notice. As this is a very distressing deformity,—far worse, in fact, than that for which the operation was originally performed, patients are very anxious to have something done for its removal. I have now operated upon five of these cases with so satisfactory a result that I think it may be interesting to the profession if I describe the mode of proceeding that I adopted.

I may premise that the operation I am about to describe is somewhat difficult and tedious, and should be performed under chloroform, and much of its success depends upon careful attention to minute details. Having freely exposed the globe by means of the wire speculum, the parts covering the inner part of the globe, including conjunctiva, sub-conjunctival fascia, old cicatrix and muscle, with condensed tissue around it, must be all carefully dissected off the sclerotic, commencing about two lines from the inner margin of the cornea, and extending upwards and downwards and then inwards, so as to expose the inner third of the surface of the globe. This dissection must be carefully made so as to preserve the flap thus raised entire; it can most readily be done with a pair of scissors. When this stage of the operation is completed, the external rectus muscle must be divided. It is better to defer this part of the operation until now, because the action of the external rectus is useful in keeping the globe well fixed outwards during the first stage of the operation. The next part of the operation is the most difficult and the most important. It consists in passing the sutures. For this purpose small semicircular needles must be used, armed with a piece of fine silk; the flap that has been raised from the eye-ball must be firmly held with a pair of forceps, and drawn forward so as to make it tense; the needle must then be passed through it, as low down—that is, as near the inner corner—as possible. Two or three sutures may be passed in this way, at intervals of about two lines. The corresponding part of each suture must then be passed through that small portion of conjunctiva which has been left attached to the sclerotic near the cornea. This constitutes another difficulty, because the membrane here is so thin that the fine silk is apt to cut through: this I found a serious difficulty, in my first operation, and one that materially interfered with the success. In order to

obviate this, I adopt now the following expedients:—I first separate this portion upwards towards the cornea; the needle must then be passed through it, and then back again, so as to include a portion, which must be tied tightly, so as to prevent it from tearing out. The next point is to cut away all that portion of the lower flap that can be spared beyond the part where the suture has entered, merely leaving a sufficient margin to hold it. The silks may be now drawn tightly, and tied to the end that is already fixed near the cornea. The immediate effect of this proceeding ought to be to procure some inversion, if the various steps of the operation are properly performed. The hope and intention are, to get the parts to unite to the globe in their new position, and thus retain the eye. This, however, is only partially the case; there is always some tendency partially to relapse, and in two cases I had to repeat the operation, with ultimate success. The sutures may be allowed to remain until they ulcerate through; the subsequent inflammation is usually slight. The amount of mobility in the eye is very limited, but so long as it occupies a central position, this circumstance is not found practically to occasion much deformity, and is an immense improvement upon the facial discord resulting from extreme eversion.

My friend and colleague, Mr. Bowman, has performed this operation at the Ophthalmic Hospital, with his usual neatness and dexterity, and the effect was very perfect. My own experience would lead me now to undertake such a case with confidence in the result, if the patient would persevere; if sufficient effect is not obtained by the first operation, a second is almost sure to succeed. I may mention that one favourable effect of the operation is the drawing forward and restoring the inner caruncle to its natural place, the deformity being much increased by the sinking in of this part.—[*Ibid.*

On Vomiting during Pregnancy. By M. M. Pallen, M. D., Prof. of Obstetrics, &c., in the St. Louis Medical College.

Vomiting during pregnancy is most usually a harmless malady. About the fourth or sixth week, the stomach becomes deranged, and in the morning the lady makes efforts to vomit, or vomits sufficiently to evacuate the stomach. After some little time the feeling of discomfort passes on, and she is as well as usual. These attacks are renewed every morning for a period, varying from six to nine weeks, and then gradually subside. Some do not vomit at all—some vomit during the last months of pregnancy, and some suffer in this way in the first months or latter months, during the night only.

It sometimes happens, however, that vomiting during pregnancy is a most serious malady, and terminates fatally. In a discussion in the *Academie de Medecine*, Dubois stated that in the course of

thirteen years, he had met with twenty fatal cases. Prof. Stoltz, of Strasburg, states that of four cases which came under his notice, three died.

A fatal case of vomiting in pregnancy was lately reported by Dr. Buckingham to the Society for Medical Observation in Boston. "A young woman, twenty-six years old, was married on the first of June. On the 10th of the same month she missed her catamenia; on the first of July, she had nausea and vomiting, which continuing, she sent for Dr. B. on the 7th of August. At that time, she was unable to retain any food, the vomiting being almost constant. On the 12th, she had yellowness of the skin and conjunctiva. The matter vomited was not bilious, though the urine and saliva were loaded with bile; no pain or symptoms of inflammation about the liver; for ten days she vomited without cessation. On the 20th, she was wandering—matter vomited, grumous, dejections involuntary. After this date, she vomited more rarely, and on the 24th she died. The indications of pregnancy were perfect. No autopsy was permitted—every mode of treatment was made use of. Dr. John Ware, who was called in consultation, gave an unfavorable prognosis, and said he had seen two similar cases in one family." (*Boston Med. and Surg. Journal*, Vol. LII., No. 7.)

I could cite other cases which are reported, but these are sufficient to show the occasional gravity of the affection. Three fatal cases have occurred under my own observation. The first case occurred several years ago. The woman had been vomiting during the two last months of pregnancy—she was exceedingly prostrated when she fell in labor. The pains continued ineffectual for twenty four hours, when I was sent for—I found her with a pulse of 140, and very feeble—I delivered her with the forceps, but she sank in a few hours.

The second case occurred in the practice of a medical friend. I saw her in consultation. She died after a month of vomiting.

The third case, was a lady, who commenced vomiting about the sixth week of her pregnancy. For three weeks she threw up almost every thing she took in her stomach; after that period her pulse increased in frequency, rising up to 100 in a minute; she complained of dimness of vision, and was unable to sleep at night. In the course of a week more, the pulse increased to 120; the dimness of vision increased, there was a ringing noise in her ears; mild delirium, and continued insomnolency. During the whole of this period there was obstinate constipation, no alvine evacuations unless procured by medicines. These symptoms continued to increase for a fortnight, when she died. During the last two weeks, however, she was able to retain some food on her stomach. The treatment pursued, consisted of such mild cathartics as could be tolerated by the stomach, very small doses of calomel being best retained, enemata, and counter-irritants to the epigastric region, with the use of such remedies which sometimes allay vomiting, as the effervescing draught, lime water, creosote, &c., &c.

During the month of October last, a lady from a distance came to St. Louis, to consult me about her health. She stated that some two years before, she became pregnant with her third child; that she had suffered a great deal from nausea and vomiting, from about the eighth week of pregnancy to the seventh month, when she had a miscarriage and was very ill. In a short time after that she again became pregnant and suffered in the same way, until the fifth month, when she miscarried, and was so ill that her life was despaired of. Since which period her health was very bad; she complained of pain in the lumbar region, pain in the hips, sometimes radiating down the thighs, a bearing sensation when she walked about, leucorrhœal discharge, and irritability of the bladder; she had a feeling of weight in her stomach after taking food; her skin was sallow, and she was incapable of much exertion.

Examination per vaginam, detected an enlargement of the cervix uteri, with an abrasion of the epithelium all around the os, and extending into it, which was fissured, and had the *appearance* of being granulated, and was patulent. Supposing that her ailments arose from the inflammation, and its consequences, of the neck of the womb, I advised her to put herself under the treatment of her medical attendant at home, but she preferred to return to St. Louis. In about a month she came back, and I commenced the treatment of her case. Two weeks after her return she missed her catamenial flow, and became very much alarmed lest she should be pregnant. In about two weeks more she commenced vomiting, and her husband and she beeame very desirous that I should produce an abortion, as they were sure she could not live through her present pregnancy. I determined however to wait. In the first instance, I was not sure she was pregnant; and secondly, if she were, the urgency of the symptoms then did not require any such mode of procedure. She missed her catamenia again, and the appearance of the nipples, and the presence of kiestine in the urine determined the existence of pregnancy; her vomiting became so excessive, that she could not retain cold water on her stomach; she had fever during the greater part of the day, and was getting so weak that she could not conveniently set up. Every thing which I tried to alleviate her suffering did no good, and I determined to bring on abortion. I tried the douche as recommended by Kiwisch and Tyler Smith; at the same time using the galvanic battery. These were persevered in for about a week, without producing any effect. I then gradually dilated the os uteri by introducing a sponge tent into it—every day inserting a larger piece during five days—at the expiration of this period I could introduce my index finger into the cavity of the womb. Sixty grains of ergot in infusion or divided doses were now given, and the abortion took place without any hemorrhage. The vomiting ceased immediately, and the treatment for the uterine disease being resumed, she returned home in the latter part of February, quite restored to health.

Vomiting during pregnancy does not depend on any inflammation of the stomach. It is a reflex action from the irritation in the uterus; thus, where death of the ovum takes place, whether it be expelled immediately or not, the vomiting ceases, clearly showing the connexion between the two. Moreover post-mortem examinations have failed to detect the morbid appearance of inflammation in the stomach.

In a case quoted by Churchill, from the London Lancet, it is stated, no morbid appearance was observable in any part of the body. Two cases are also quoted, which were reported by M. Dance, Hotel Dieu, in the *Reporter*. In one, it is stated, "no lesion could be detected in the stomach, except a slight reddish tint in the mucous membrane." The whole of the intestinal canal was sound. In the other, there was red and softened spots near the cardiac orifice of the stomach; but we can readily enough understand that such spots occur independently of inflammation.

Obstinate vomiting during pregnancy not yielding to medical treatment, and terminating so often fatally, suggests to us at once the propriety of inducing abortion. The question arises, however, in every case—when are we justifiable in doing it? or are we justifiable in doing it at all? I have some friends, whose opinions I respect, who contend that it should never be undertaken. They say that the destruction of the ovum is an evil, and that religion requires that we should not do evil, even that good should come of it. I think that this is too restricted a view of the matter. It is better that the nonviable ovum, or even the viable fœtus should perish even by our hand, to save the life of the mother, than tamely to stand by, and let both perish. This, I believe, is the voice of the profession in Great Britain, France, Germany, and in the United States.

Being satisfied then as to its propriety, the question is, when should it be done, and what is the safest method? All are agreed that it should not be performed as long as there is a reasonable hope that the life of the mother can be saved without a resort to the operation. The question to determine is, when are we obliged to give up such a hope.

M. Dubois in the discussion already referred to, laid down the following rules: Never to perform the operation when the signs of extreme exhaustion are present, as evidenced by considerable loss of vision, cephalagia, comatose somnolence, and disorder of the intellectual faculties; "because," says he, "we should not save our patient, but perhaps accelerate her death, and bring discredit on the operation." Of the propriety of this rule, there can be no doubt, and for this reason I did not bring about abortion in the third case I have related. Again, he says, "we should also abstain from operating when the vomiting, though violent and frequent, still allows of some aliment being retained; when the patient, though wasted and feeble, is not obliged to keep her bed; when the suffering has not yet induced intense and contin-

uous febrile action; and when other means still remain untried" —because we should sacrifice a pregnancy which ought to be saved. According to him, there is an intermediate period that should be chosen, which is characterized by the following signs: 1st. Almost incessant vomiting, by which all alimentary substances, and sometimes the smallest drop of water, are rejected. 2d. Wasting and debility, which condemn the patient to absolute rest. 3d. Syncope, brought on by the slightest movement, or mental emotion; a marked change in the countenance. 5th. Severe and continuous febrile action. 6th. An excessive and penetrating acidity of the breath. 7th. The failure of all other means.

These rules, although in the main good, are liable to some objections; sometimes the food is retained in the stomach for a few days, and then the vomiting returns as bad as ever; sometimes a portion of the food taken in the day is retained, yet the case goes on to a fatal termination; sometimes, although the wasting and debility show well enough the untractable nature of the affection, the patient can set up a portion of the day, until she is so extremely exhausted, that she would fall in that situation, when according to his own rules, the operation would fail to save her life. There is danger of waiting too long, as then the patient would die, either from the effects of the previous disease, or because she would be too feeble to undergo the operation.

The results of M. Dubois' practice seem to prove the truth of this assertion—of four cases, in which he operated, three died. Professor Stoltz lays great stress upon the operation being performed in good time, because if we wait until the effects of the sympathetic re-action constitute in themselves a serious disease, the evacuation of the womb does not induce a cessation of these, and may in certain cases, even hasten death. It is difficult to lay down any particular rules to guide the practitioner in undertaking this most responsible operation. The experienced physician can generally judge how far he can rely on the efforts of nature and therapeutic means. But I imagine that when the patient retains so little food that she becomes daily more feeble and emaciated, when the pulse permanently increases in frequency, getting up to 100 or more, and when all other means fail to relieve the nausea and vomiting, we are justifiable in operating, without waiting for further symptoms.

I now come to the consideration of the best method to procure abortion when the operation has been decided upon. Various means have been proposed:—

1st. The administration of ergot.
2d. Detachment of the membranes.
3d. Puncturing the membranes.
4th. Electricity.
5th. The uterine douche.
6th. Dilatation of the os and cervix uteri.

Ergot is very uncertain in its operation, although it will, un-

doubtedly, sometimes stimulate the gravid uterus at full term to powerful contractions, yet it often fails at that period. In the early months it is not to be relied upon at all—it would be too much to deny that it fails altogether in the early months, as the evidence is sufficient that it has succeeded; but the success is too unfrequent to justify our confidence in it—as an adjuvant to other methods it ought to be tried; that is to say, when other means have set up uterine action, it will have occasionally a decided effect.

The detachment of the membranes in the first three months is a method not without danger. Moreover, it is sometimes difficult, as the womb is not altogether under the command of the instrument. Again, the operation has been performed without effect.

Puncturing the membranes is far more certain, it always brings on labor in a few days. But in the early months, say in the first fourteen weeks, it is difficult to perform, and certainly very hazardous. It is true, it is done often, without any risk, but the annals of medical jurisprudence give many cases of fatal result. The same has occurred in legitimate practice. Dr. Tyler Smith refers to a case of a patient who died after the performance of the operation, in whom, the internal iliac artery was found to be punctured.

Electricity is a safe method, but it totally failed in the case I have reported. I have on several occasions referred to the power of electricity in stimulating the uterus in tedious labor, but it does not seem to have the same effect in bringing on abortion in the early months; that it has done so there can be no doubt. Dr. Ashwell relates a case, in which it was used in supposed amenorrhœa, and the patient being pregnant, abortion occurred.

The uterine douche was first proposed by Professor Kiewisch of Wurtzburg. It consists in directing a stream of warm water from a height by means of a syphon, continuously upon the os uteri. Dr. Tyler Smith has modified the operation by alternating warm and cold water. In a case, in which he successfully employed it, labor being brought on in sixty-four hours, the following method was adopted.

A piece of India-rubber tube, above eleven feet long, and half an inch in diameter, was connected with a straight tube from an injecting apparatus, five or six inches in length, the latter forming the uterine extremity of the syphon. A vessel containing two gallons of water of about 110° Fah. was placed nine or ten feet from the ground, the patient being placed in an empty hip-bath; the proper end of the tube was now passed into the vagina, and directed towards the os uteri, where it was held steadily—after exhausting the tube, the other extremity was placed in the warm water, the stream immediately began to flow with considerable force against the os uteri, and continued until the whole contents of the vessel had been discharged. Two gallons of cold water were then poured into the vessel and discharged in the same man-

ner; five applications of the douche were made at intervals; the patient was within three weeks of full term. I tried this method in the case already referred to, and it failed. Will it produce abortion in the early months?

Dilatation of the os and cervix uteri has been objected to, as likely to lead to peritonitis; I think on insufficient grounds. It was the method with which I succeeded; pains were induced, and then ergot being given, the effect was produced without accident. I can readily understand that in the latter months of pregnancy where there is considerable obliquity of the uterus, it would be difficult to reach the os uteri—under such circumstances the douche might be preferable.

There are cases of such urgency, that it would be proper not to wait for the slower method of dilatation, or of the douche; the patient may be seen when it is necessary to arrest the vomiting, and its co-existing symptoms immediately. If she has passed her fifth month, the proper method would be to puncture the membranes; by discharging the liquor amnii, it is found, the vomitng will cease even before the delivery of the fœtus.

To sum up. In the early months, if the operation be indicated, the method I would adopt would be gradual dilatation of the os and cervix uteri by means of sponge-tents; if the symptoms were urgent I would also try the douche, galvanism and ergot. In the latter months, say after the seventh month, I would rely on the same means, as by such we are more likely to save the life of the child, than if we were to puncture the membranes, and discharge the liquor amnii. If at any time subsequent to the fifth month, the case required immediate relief, and there was danger in delay, I would puncture the membrane, and discharge the liquor amnii.

[*Western Lancet.*

The Differential Diagnosis of Tumors in the Female Pelvis. By Richard Gundry, M. D.

By the word "Tumors," it is intended, in the following observations, to express not only those pathological conditions which in its strict and most limited application are properly so designated, but also, by an extension of the term, many diseases attended by increased size of the organs affected—the results of exudations in the various tissues of the pelvis—and even physiological changes taking place therein: all of which must sometimes be considered in forming a differential diagnosis of a pelvic tumor. Thus, the existence of pregnancy is not only first suggested by an increased lower abdomen, but both in its normal position, and occurring out of its usual habitat, is always an important point to be affirmed or contradicted. The unpleasant and proportionably frequent errors which have arisen on this very point, are too well known to need any other allusion in this connection. A pelvic abscess often simulates a true tumor during its progress and by its remains af-

terward. Most, if not all the organs and tissues within the pelvis may become the seat of various tumors, with many of their physical and rational symptoms identical but very different as to the prognosis their character suggests, or the treatment they require. Nor must we omit, in the consideration of these numerous sources of difficulty, another class of diseases which will require discrimination from tumors of the pelvis—more rare than those above mentioned, it is true, but sufficiently frequent in the past to have caused errors painful to the medical attendants and disastrous to the patients, and always requiring much care in order to their recognition. I refer to those tumors of the kidney, spleen, and even the liver, which, by their enormous size, may enter the limits of the pelvis. A moment's reflection upon these numerous affections and their common situation in a confined region—little accessible externally, and to be explored internally only with great tact and delicacy—will enable us to appreciate the difficulties and also the importance of the task I have undertaken. My purpose, therefore, is to consider in their relations to one another the tumors met with in the pelvis, the influence each exerts upon parts therein or adjacent thereto, and from every available source to gather the means of arriving at a satisfactory differential diagnosis.

It must especially be remembered that the greatest difficulties we experience in distinguishing these tumors from each other, do not generally occur in the well marked or "typical" specimens of the disease, but in those in which usual and prominent phenomena are either absent or masked by unusual symptoms. The latter may sometimes be identical with characteristic signs of other pathological conditions. They naturally mislead, unless the greatest care is employed in the scrutiny. Moreover, the difference between reading symptoms in accounts of diseases recorded by authors and *reading* the same at the bed-side—soon discovered by the least experienced—is nowhere more palpable than in these disorders.

In forming a differential diagnosis of a pelvic tumor, there are two problems to be solved, viz: *To ascertain the organ to which it belongs* and *the pathological character of the tumor itself.* Sometimes one, sometimes the other of these is the more easily ascertained. I shall take them up in the order I have stated them, although, in fact, this is not the invariable mode of arriving at the truth: for the order of inquiry may be and frequently is the reverse, from the readiness with which the latter is made out. For instance, in those cases, somewhat frequent, where the diagnosis is easily made that the lower abdomen is distended by a considerable quantity of fluid, and that it fluctuates, much more difficulty is experienced in order to ascertain whether the effusion is in the general cavity of the abdomen, or belongs to the ovary, or in some cases to other organs. Often, therefore, an answer to the former proposition is all that is necessary, and the inquiry then terminates.

TO WHAT ORGAN DOES THE TUMOR BELONG, OR WHERE IS ITS

SEAT?—I shall notice the different sources of information, and the results thus obtained, in their regular order. We omit all description of rational symptoms, though exceedingly useful in many cases, more, however, to corroborate than suggest an opinion, and more available (if the tumor be seen first in its full grown state,) to denote its character as to malignancy, or the reverse, than the determination of its origin. To one who watches the tumor from its first appearance, they are not only useful, but almost sufficient alone, in many cases, for diagnostic purposes. But this is rarely the privilege of the surgeon consulted, to whom such cases come for an elaborate opinion when lapse of time and faded recollections have impaired the value of the history derived from the patient or her friends.

Inspection and external examination furnish us facts as to the position, extent, shape, resistance and movement of tumors. These should be carefully noted, because, though an item may seem unimportant *per se*, it may yet be found an essential link in the whole chain of evidence formed by all the symptoms.

The enlargement of the abdomen may include not only the lower but the upper abdomen also. Tumors of the liver, spleen, kidney, and omentum—which descend into the pelvic cavity—ascites, and some ovarian tumors, may so fill the abdomen as to infringe on the thoracic cavity and interfere with the movements of its viscera. Pregnancy of the same apparent size does not do so to such an extent. In these cases, occupying the abdomen more or less, the principal points made out on external examination, are the margins of the tumor and their continuity with organs beyond our reach. The real and apparent continuity differ very often. The examination requires the utmost possible relaxation of the abdominal muscles and is best performed when the patient lies on her back, with her lower limbs flexed thoroughly, if necessary in the position for lithotomy. We may thus often detect the true connection of those tumors which counterfeit the appearance of springing from the pelvis, but really come from the viscera above. Serious consequences may result from a failure in this. A case is recorded where an incision was made in the abdomen to remove a supposed ovarian tumor. Removal being found impracticable in this manner, and the mass being solid, it was attempted by suppuration from the introduction of sponge tents. Death resulted in a few days, and the autopsy revealed that the morbid growth was an enlarged spleen. In a case I observed for some months, the lower abdomen appeared more completely filled than above. To the right, the margin was more distinct than on the left side, where it was traced with difficulty. On inspection, it appeared continuous with the pelvis; but on examination in the position described, the continuity of the tumor on the left side upward under the ribs, was apparent. The margin was crescentric, the concavity upward, crossing about the umbilicus, leaving a third of the abdomen free at the right upper portion. Corresponding dullness of course prevailed. Its con-

nection with the spleen was evident, but it required several examinations to verify the diagnosis, and the whole of the crescentric margin was only made out on the increasing emaciation of the patient. To add to the sources of error in these cases, malposition of the uterus, from pressure, may be present. Partial prolapse existed in the case alluded to. Venous and arterial murmurs are more or less distinctly heard in these cases.

The form and extent of the general enlargement are important points in the diagnosis of renal tumors. There is generally, not always, a space between an enlarged kidney, the ribs above, and the iliac fosa. Where the latter does not exist, it has many of the external characteristics of an ovarian tumor. It, however, occupies a position behind that of the latter, and fills the lumbar regions. It also retains its characteristic oval shape. In hydronephrosis cysts and hydatid of the kidney, when the extension is greatest, the colon passing over it sometimes has the appearance of another tumor. The pelvic organs are seldom affected in position. The signs derived from other sources we shall allude to afterward. The urinary secretions throw great light on these, somewhat obscure, affections. In extensive pyelitis the rational symptoms are of much weight. Hepatic tumors rarely occupy so large a space, and their continuity is usually not very difficult to make out.

In ascites the enlargement is more uniform than in most other conditions alluded to—it is more diffused throughout the whole abdominal region, and varies more with the position assumed by the patient. It is generally globular in form. Unless the abdomen be filled to the utmost limits of toleration, the gravitating ascitic fluid produces appreciable alterations of the *surface;* in this respect differing from ovarian cystic tumors, which move, it is true, from changes of the position of the patient, but do so, as a whole, changing its boundaries and form, (as often detected,) and produce corresponding changes of the exterior, readily suggested by the altered level of a contained fluid. In ascites, when the patient lies on the back, there is generally bulging on both sides, so that the distance between the iliac crest and lower ribs is greater than in ovarian tumors. In the latter, when the curve thus occurs, it is more often confined to one side, and is seldom so marked. The umbilical region is at the same time flatter in the former. Measurement from the umbilicus to the spinal column, and from the fourth lumbar vertebræ to the mesial line anteriorly will scarcely differ in ascites. In ovarian tnmors, on the contrary, there is marked disparity. Inspection reveals the veins which ramify over the abdominal surface, increased in calibre in ovarian tumors, but not in ascites. On the other hand, the skin is more distended in the latter.

Uterine tumors, including pregnancy, occupy the central portion of the abdomen, and have a globular shape. Even where they occupy the whole, or nearly so, of the abdomen, their extension

from the maedial line, equally, can often be traced in the history. In solid tumors there is a lobulated feeling of the uterine walls. In pregnancy, of course, there is something to be learnt from a comparison of size and time, since apparent growth commenced. Anasarca accompanies pregnancy more often than other tumors, though it is found associated with them also.

The resistance of a tumor may sometimes be useful more perhaps in determining its character than connection. Hardness is often characteristic of *fibrous* tumours of uterus, a *doughy* feel in pelvic abscess—fluctuation in encysted tumors of organs and ascites. It is more pronounced in the last named. In hydrometra, and especially in extensive dropsy of the amnion, it is also very plainly felt.

Partial enlargement accompanies nearly all pelvic tumors, not included in the foregoing. External palpation, therefore, gives but little aid, except conjoined to other modes of exploration. Attention, however, should be given to the position, its relation to the mesial line—the boundaries of the tumour—its evenness or inequality—hardness and resistance in general.

Percussion confirms many of the observations, by the previous modes. It also adds to our information as to the limits of tumors. The tumors of the spleen are of course marked by absence of resonance throughout their extent. In those of the kidney, the situation of the colon crossing it, is marked by resonance, in contrast to the utter dullness of the rest of the tumor. The dullness extends to the spinal column. In tumors of the omentum and pelvic abscess of much extent, with modified dullness, there is a boggy feeling imparted to the fingers. In ascites the resonance of the intestines, is usually met with anteriorly, when the patient lies down; in which position the bowels float on the fluid. Dullness is evident in the lumbar regions. The contrary result is obtained in ovarian tumors. Here the anterior abdomen is dull from the intervening body. The bowels behind give a very clear intestinal sound in the lateral regions. About the umbilicus, perhaps, the dullness is most evident. These are, therefore, very important points in the diagnosis of ascites from ovarian tumors. Their value is sometimes invalidated by the following circumstances: the mesentery may be very short, naturally, or rendered so by force of disease, and may thus bind the intestinal canal to the vertebral column; or, ascites may be so enormous, and the abdominal covering so expanded, that a normal mesentery may be insufficient to allow the intestines to float. Under these circumstances, the intestinal sound will be absent as high as the epigastrium; and even the lumbar resonance, present through this latter, is yet more rarely met with. I have seen two instances in which these predisposing sources of error were present. In one case of enormous accumulation of fluid, with tuberculous exudation of the peritoneum, general dullness prevailed all over the abdomen. The mesentery was of normal length, and free. In the other case, an ovarian tumor was diagnosed by several

capable gentlemen accustomed to such investigation from the dullness of sound, and other symptoms. The effusion was not so great, and the shape of the tumor, everything, in fact, suggested the ovary as involved. Yet the result showed a remarkably short mesentery co-existing with ascites. F. Von Kiwisch relates one of these embarrassing cases, where a still further complication existed by a displaced and fixed uterus, as if from pressure of an ovarian tumor. It is not easy to see how an error of diagnosis could be avoided. After death, the autopsy showed chronic tuberculosis of the peritoneum as the cause of the effusion so extensive, and adhesions of the uterus. The absence of inequality of surface should be observed in these cases, as this is rarely or never the case in ovarian tumors. From percussion, we therefore conclude that ascites is present when we find an accumulation of fluid accompanied by distinct intestinal resonance anteriorly, with dullness laterally. But the absence of these symptoms does not negative its existence.

Hydatids occurring near the surface may be detected by a feeling of elasticity imparted to the fingers, on palpation and percussion. Piorry describes a hydatid tremitus like the sensation from striking a watch when held in the hand. I think the former is more appreciable, and easily acquired after meeting with such cases.

Auscultation is especially useful in cases of suspected pregnancy, even when it happens to be complicated with ascites, dropsy of the amnion, or other tumors. If the pulsations of the fœtal heart can be distinguished, there can be no doubt of the existence of pregnancy, and the inquiry is concluded. But this sign may be wanting during such a condition, for proof of which other signs must be relied upon. The sounds resulting from the movements of the fœtus, are very obscure at first, as of a body moving under the stethescope, but later in gestation, the sound is accompanied by a shock or elevation of the ear of the observer, like a blow on the parietes of the uterus by some parts of the fœtus. But the fœtal heart sounds, and these are with difficulty made out when dropsy of the amnion is present. To these sounds may be added the funic "soufflet." There is also another very distinct sound heard in pregnancy, and formerly believed to be pathognomonic, and to depend upon the placenta as its cause. It was thus termed the placental murmur. More acurate observation has shown it to depend upon the vessels of the enlarged uterus. Although not peculiar to pregnancy, for it is found in the enlarged uterus from fibrous tumors, (hypertrophy—polypi,) it assists in determining the uterus as the seat of the tumor. Venous murmurs are heard in splenic tumors, very low down sometimes, accompanied by a thrill. In some fæcal tumors, also it is stated by Hennoch that crepitation has been heard.—[*Ohio Med. and Surg. Journal.*

On the use of Thuya Occidentalis, (Arbor Vitæ,) in the Treatment of Cancer. By J. R. LEAMING, M. D., Physician to the Northern Dispensary, N. Y.

About the 1st of July, 1854, my attention was called to a little girl, not quite three years old, who had received a slight injury of the hand, as was supposed from a fall. I directed the application of cold water, and the swelling and the soreness disappeared. On the 12th of September I was called to see the child, and found a purple tumor, not distinctly defined, occupying and complicating the flexor muscles of the thumb. The veins leading to the tumor were enlarged and tortuous. The tumor itself was not tender, and the bone was not implicated. It had the peculiar elastic feel of erectile tumor. I learned that it commenced growing about two weeks previously. I informed the parents of my fears respecting the malignant nature of the disease, and requested a consultation. Accordingly, the next day, Dr. W. H. Van Buren saw the case with me, and confirmed my diagnosis. On the 20th of September, Dr. Van Buren met me again, and explored the tumor with a grooved needle. A glutinous matter was obtained, indicating that the disease was of the colloid variety. The treatment directed was small doses of hydrarg. bichlor. in tr. cinchon. co., the hand to be painted every day with tr. iodine and poulticed.

The disease rapidly increased, attacking the carpal and metacarpal bones, the back of the hand became thickened, and hard, and the veins large and tortuous. An abscess formed where the exploration was made and discharged healthy pus. Still the tumor increased in size.

Being informed by a medical friend of the successful employment of thuya occidentalis in a case of rapidly developed fungus-hæmatodes of the eye—the tumor gradually subsiding under its use, and returning on its intermission, but finally completely disappearing on persisting in the employment of the remedy—I determined to resort to it in this case. It was of course a forlorne hope; but the character of the disease warranted any course of treatment which offered a shadow of success. The child was accordingly put upon the use of a tincture of the leaves of this tree. In two weeks the appearance of the hand was changed; the tumor had not increased in size. In two weeks more, the disease was evidently subsiding, the tumor was smaller, the back of the hand was not so thick and hard, and the veins were not so large.

On the 29th of October, the father of the child was attacked with severe inflammatory rheumatism of the right knee-joint. The disease resisted the treatment, only partial relief being obtained from hydrarg. mass and ext. conii, tr. colchic. sem., potass. iodid., potass. nitrat., etc., till the 10th of November, when the pain was relieved. At four o'clock, on the morning of the 11th, I was called to see the patient, and found that he had vomited half a pint of blood; soon after I arrived, he vomited more, making in all about a quart

of moderately fresh looking blood. I gave him fifteen drops of spts. terebinth, and sent a messenger for Dr. Geo. P. Cammann to meet me in consultation. Dr. C. soon arrived, and carefully examined the patient. We agreed upon the following diagnosis: That there was an old trouble of the liver, most probably cirrhosis, and that the hemorrhage was from the portal circulation induced by this biliary trouble.

For a few days the patient took nothing but mulled wine and beef tea. Altered blood passed from the bowels twenty-four hours. Forty-eight hours after the first hemorrhage he vomited a small quantity of blood, and passed altered blood for thirty-six hours afterward. The bowels were tympanitic, pulse one hundred and ten, skin moist, tongue furred. The patient presented a yellowish, waxy appearance. He was directed to take hydrarg. sub. mur. one grain, and extr. taraxici twenty grains, every day or every other day, for the purpose of bringing the system gradually under the influence of the mercurial. Healthy bile was obtained in the evacuations, but there was no improvement in the patient's health. At this time, reflecting upon the case, I came to the conclusion that there was malignant disease connected with the liver. My reasons were, the appearance of the patient, the history of the case, and the history of the patient's family. His mother died when he was a child. Three years before her death a purple tumor appeared on her hand. It resisted treatment, and the hand was amputated. Six months before her death she vomited blood, and died of some internal disease. His mother's brother died of cancer of the lip. His sister vomited blood and died of some internal disease. His little daughter is under treatment for cancer of the hand.

At my next meeting with Dr. Cammann, I stated my earnest convictions respecting the malignant nature of the disease connected with the liver. Dr. Cammann believed the disease was of long standing and of a very serious nature, but that we needed further evidence to warrant us in making up a certain diagnosis.

On the 30th of November, Dr. Valentine Mott saw the patient with me in consultation. The patient at this time was very tympanitic; there was also a small quantity of fluid in the peritoneal cavity. The heart was pushed up from its normal position, so that the impulse was felt above the nipple. He was weak, tongue furred, pulse one hundred and ten, skin moist, and urine scanty.

After examining the patient and hearing the history of the case and of the family from me, Dr. Mott's diagnosis was cirrhosis of the liver with a suspicion of malignant disease. I commenced giving the thuya in tinct. made in the following manner: The leaves and small twigs were crowded into a jar and then covered with alcohol; half a teaspoonful every three hours. The rheumatism had entirely subsided after the hemorrhage; still there was no improvement in the patient's health.

On the 6th of December, Dr. Willard Parker saw the patient in consultation with me. After a careful personal examination, and

hearing the history of the case and of the family from me, his diagnosis was scirrhosis of the liver and suspicion of cancerous disease.

The patient seemed to be rapidly sinking. I increased the dose of the thuya to two teaspoonfuls every three hours, and gave in addition a mixture composed of hydrochlorate of ammonia and chlorate of potass. each ʒi, and cinnamon water ʒvi, a tablespoonful every hour or two. He seemed to improve almost immediately, his appetite became good, and he gained strength rapidly. A week after Dr. Parker saw him he was able to walk into an adjoining room, and sit there most of the day. The 12th of December, I found a small tumor in the left side on a line with the heart, just under the ribs. In giving it an impulse it would leave the hand and return to it, giving the sensation of the fœtus in ballotment. The tumor grew rapidly, and I could notice an increase in size at each examination.

On the 18th of December, Dr. Cammann made a careful examination of the tumor. It rested upon the kidneys, and evidently was the cause of the displacement of the heart. It extended over toward the right side beyond the median line and downward almost to the umbilicus.

There was more urine secreted than there had been; still the dropsy gradually increased. A great variety of active diuretics had been used without any beneficial effect; indeed they all seemed to do harm, consequently he was confined to the thuya and mixture of hydrochlorate of ammonia and chlorate of potash.

On the 4th of January, the dropsy having increased so much, it was decided to relieve the patient by tapping. On the 6th of January, at the patient's request, Dr. W. H. Van Buren was called, and drew off thirteen quarts of amber-colored fluid highly charged with albumen. In a week he was able to walk about and ride out, driving an open carriage several miles into the country with enjoyment and benefit. With the exception of the physical inconvenience of the tumor lying on the kidneys and the portal veins, the patient seemed to enjoy better health than he had done for some years.

The dropsy rapidly returned, and tapping was necessary again in two weeks. Dr. Van Buren performed this operation five times at intervals of two weeks. After the fifth tapping extensive peritoneal inflammation set in, and the patient died on the 5th of March.

A post-mortem examination was not allowed. This is much to be regretted, as it would have settled some points of interest—the malignancy of the tumor, its connection with the left lobe of the liver, and whether the extensive peritoneal inflammation was caused by the escape of matter from the tumor into the peritoneal cavity. Of the first two points there can be scarcely any doubt; still it would have been a satisfaction to have had the question settled beyond all cavil. The third point is quite probable from the sudden onset of the peritonitis.

The most important fact in the history of this case is the decided benefit received from the use of the thuya and the mixture of hydrochlorate of ammonia and chlorate of potash. Immediately after commencing the use of these remedies the stomach and liver resumed their natural functions, and the symptoms of scirrhosis disappeared. The action of the kidneys was also much improved.

During the early part of the father's severe illness, the child was neglected and the thuya discontinued. The hand became worse, and the disease again attacked the carpal bones. When the thuya was prepared for the father, the child again commenced its use, taking fifteen drops every two or three hours. In a short time its benefit was quite perceptible. At the present time only a trace of the disease remains, and the remedy will be persisted in till the child is well. The hand will remain permanently injured and probably will be atrophied.

Thuya occidentalis, or arbor vitæ, belongs to the pine tribe (coniferæ,) is a native of this country, and is cultivated in our gardens. The leaves are the parts used medicinally. They are described in the U. S. Dispensatory as having an agreeable balsamic odor, especially when rubbed, and a strong, balsamic, camphorous, bitter taste."

The thuya has long been used for medicinal purposes, but with no settled opinions in regard to its therapeutic properties. It has thus been employed in intermittent fever, scurvy, rheumatism, and as a stimulant, diuretic, diaphoretic, and vermifuge. In the Revue de Therapeut. (Jan. 1st, 1855,) there is a notice of the thuya having been recently employed by a Hungarian physician in the treatment of venereal excrescences which had resisted mercury, cauterization, and excision. He employed the tincture, using three pints of the leaves to six of rectified alcohol, applying it from time to time with a brush. The excrescenses rapidly diminished in volume, and a radical cure is reported to have been obtained in five days.

Thuya occidentalis is a new remedy for cancer. There have been a great many new remedies for this dreadful disease before, which upon trial have proved utterly valueless; so it may be with this. Two or three recoveries do not prove the value of a remedy. These cases are related that it may receive a more extensive trial; and if others should find it in a proportion of cases as beneficial as it has been in the cases I have related, it is one of the greatest boons conferred upon mankind.—[*Stethoscope.*

Remarks on a peculiar Form of Tumor of the Skin, denominated "Pachydermatocele," illustrated by Cases. By VALENTINE MOTT, M. D., &c.

We are gratified to see our distinguished countryman, Prof. Mott, honoring his election to a membership of the *Royal Medical*

and Chirurgical Society by the contribution to its transactions of so valuable a surgical paper.

The disease to which Prof. Mott gives the name of *pachydermatocele* is congenital, having its origin in a brown spot or mole, and increasing with the years of the individual until they present hideous deformities.

The morbid structures have all been more brown than the surrounding integuments, with a flabby feel, very like a relaxed and very emaciated mamma. In several of the cases there were two or three layers or stories, as in the one upon the neck and shoulder, resembling the fanciful and successive turns of a tippet, or three separate folds of a rich maroon velvet curtain. They do not appear to possess any great degree of vascularity, neither having veins visible upon the external surface, nor diminishing in size much after being detached from the body, therein differing essentially from the nævus maternus, or aneurism by anastomosis. * * * * * On cutting a slice transversely, or making an incision into these growths, the sub-dermoid structure to the eye seems to be hypertrophied areolar tissue, with very little evidence of blood vessels running through it. From their general appearance and duration, there is no evidence whatever of anything malignant in their structure or tendency. In one of the cases there was a return of the same kind of tumor upon the same spot, namely, the head, though to a less extent, demanding a second excision and it returned again, and is now of the same shape and character as at first. In another patient, a boy, the same disposition to return was observed during the granulating process, but it was completely conquered by the patient and skillful application of compressed sponge and the roller bandage. In the other three cases, there was no disposition whatever to a reproduction of the disease. The sense of feeling was somewhat diminished below the natural standard in all of the cases. In only one was there any ulcerative action, and this arose entirely from want of attention to personal cleanliness. The largest required to be carefully washed every day with soap and water, then well dried and powdered with some farinaceous substance. If this was neglected for one day, an acrid fetid discharge took place, soon leading to excoriation.

Five cases of this disease are reported in the paper, and the different operations necessary to their removal fully described. We shall have space to introduce but one case, which will afford a fair illustration of the nature of the tumor, and the operation undertaken for its removal.

Case V.—This was truly a monstrous morbid production. Though disgusting and even frightful, to ordinary beholders, there was, in its organization and external characters, looking at it as a morbid growth, something symmetrical and beautiful. From the mother's statement, it was observed soon after birth. Miss L——, æt. about 45 years, of robust country health came to me from the western part of the State of New York, as she said, to show me a

tumor, and to know if it could be removed. From the compact and regular arrangement of her dress, the impression on my mind at once was, that it was of no great importance as to size. My astonishment was not a little excited, as she removed her dress from the chest and neck, not only from the immense size of the mass, but that it could all be so completely stowed away, as not to disturb the apparent symmetry and harmony of her proportions. The tumor was of a dark brown or copper color, of a soft, elastic feel, very much resembling a collapsed lung or a placenta. It hung in beautiful and fantastic folds, like the convolutions of a tippet over the neck, shoulder and chest. There were five of these folds or stories, the smallest above, the longest or broadest below. It was attached to the healthy integuments behind and in front of the ear—directly under its lobe—to the entire extent of the side of the neck from near the nucha to the edge of the larynx and trachea, to the whole line of the clavicle and middle of the upper bone of the sternum, over the shoulder, part of the scapula, and reaching upon the arm to near the insertion of the deltoid muscle—over the entire pectoralis major to the middle of the sternum and ensiform cartilage, and to the upper part of the rectus abdominis and latissimus dorsi, with a portion of the serratus magnus anticus. The lowest loose fold hung a little below a line with the umbilicus. The entire length of the tumor was twenty-one inches, its breadth eighteen inches. Stating to her that I thought it might be removed, she requested to have the operation performed if there was, as she said, "any chance of her life." Being made insensible with chloroform, the operation was performed in the following manner:

An incision was made a little below the tumor, across the lower part of the deltoid muscle, and the growth was dissected from this muscle to the top of the shoulder, then from the side of the thorax and upper part of the abdomen, then from the whole line of the clavicle, the upper part of the sternum, the back of the neck, and from the trapezius muscle, it was now detached from about the ear, and the dissection continued towards the front part of the neck, in the direction of the course of the sterno-cleido mastoid muscle, until it terminated by an incision over the mesial line of the larynx and treachea in their entire length. In all this extensive dissection many arteries required ligatures, and some of them were of considerable size. The most remarkable, and indeed monstrous, were two veins entering the subclavian, no doubt the external jugular in its anterior and posterior branches, each apparently separate. Their size was the greatest I ever saw in any superficial veins, being each not less than my fore finger. They were running close together, and were seized successively the instant on being cut with the foreceps, and were tied to prevent the admission of air, from which, on one occasion, I had seen frightful and almost fatal effects. As the tumor originated on the upper part of the neck, these two enormous superficial veins were probably the principal channels for returning the blood from the whole abnormal mass.

They lay side by side, as they went through the deep cervical fascia, but probably just on entering the subclavian, they united, as is usual in the normal state. As the operation was considerably protracted, from the extensive superficial dissection, and the large number of arteries which required ligatures, some exhaustion followed, but she was not alarmingly depressed at any moment, and quickly rallied when the anæsthesia was allowed to pass off.

With the exception of two attacks of erysipelas, one of which imminently threatened the life of the patient, the case progressed favorably, and resulted in complete and permanent recovery. The specimen was submitted to microscopical examination by Prof. Swett (not Lovett as the English print has it,) who thus reported: "The specimen appears to me to consist of an hypertrophy of the skin, and of the sub-cutaneous cellular tissue. Under the microscope I find nothing but an exaggeration of the natural tissues. There are no evidences of a malignant formation."

The paper is accompanied with two well-executed lithographic plates representing these tumors.—[*New York Jour. of Medicine.*

EDITORIAL AND MISCELLANEOUS.

Our Journal.—This number completes the Eleventh volume of the New Series of the Southern Medical and Surgical Journal. We have labored diligently to make it the expression of the Southern Medical mind, as well as the repository of whatever may have appeared of practical importance in the native and foreign periodicals of the day. Three hundred of its pages are occupied by forty original contributions from the pens of physicians actively engaged in the daily practice of their profession, and who have consequently no time to devote to theoretical disquisitions. Their papers will accordingly be found to consist principally of the facts and deductions derived from the bed-side, and in our own section of country. It is true that their name is not always known to fame; but this does not lessen the value of their experience, which is much more reliable than that of the host of closetted book-makers of the age. While we are fully convinced that Southern practitioners understand better than others the management of the Southern types of disease, and the peculiarities of the negro constitution, we have not been sectional in our selections for the eclectic department of this Journal, but have availed ourselves liberally of the contributions to medical knowledge in every portion of our extended country. It will be seen that we have transferred to our pages during the current year no less than forty valuable American papers culled from our cotemporaries. Nor have we omitted to do justice to our transatlantic brethren, whose facilities and industry have accomplished and are still doing so much for the advancement of professional knowledge.

Earnestly hoping that our efforts have not entirely failed to be satisfacto-

ry to our readers, we shall enter upon the supervision of the next volume with that renewal of zeal which a continually increasing list of subscribers never fails to incite, and with the determination to do our whole duty to the profession and to the patrons of this work.

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BIBLIOGRAPHICAL.

We are indebted to the publishers for the following works, which are for sale by Thos. Richards & Son of this city.

A Practical Treatise on the Diseases of the Eye. By Wm. Mackenzie, M. D., Lecturer on the Eye in the University of Glasgow, &c., &c.; to which is prefixed an Anatomical Introduction explanatory of a horizontal section of the human eye-ball. By Thos. Wharton Jones, F. R. S., Prof. of Ophthalmic Surgery in University College, London, &c., &c.—with 175 illustrations. From the 4th revised and enlarged London edition. With Notes and additions by A. Hewson, A. M., M. D., Surgeon to Wills Hospital, Philadelphia, &c., &c. Philadelphia: Blanchard & Lea. 1855. 8vo., pp. 1027.

To praise a work so extensively and favorably known as is the above Treatise would seem to be entirely unnecessary. Yet we cannot let the opportunity pass without commending it to the patronage of those who have not already procured it. It has been justly said to constitute, "in respect of learning and research, an encyclopedia unequalled in extent by any other work of the kind, either English or foreign." The additions of the American Editor considerably enhance its value to us.

A Treatise on Epidemic Cholera. By Horatio G. Jameson, Jr., M. D., &c., &c. Philadelphia: Lindsay & Blakiston. 1855. 8vo., pp. 286.

We can recommend this work to those who desire to learn more than they already know about the fatal disease of Cholera. It is the last work

of one of our most distinguished countrymen, who has since its publication paid the last debt of nature. Prof. Jameson was an able surgeon and accomplished writer, whose reputation as an observer will acquire new lustre from his last performance.

A Manual of Clinical Medicine and Physical Diagnosis. By T. H. Tanner, M. D., &c., &c. To which is added the code of Ethics of the American Medical Association. Philadelphia: Blanchard & Lea. 1855. 12mo., pp. 252.

This is a valuable little manual, full of useful information, especially to junior members of the profession and to those who have failed to keep pace with the advances daily made in the important subject of Diagnosis. The portion devoted to the use of the microscope, test-tray, spirometer, pleximeter, stethoscope, dynamometer, ophthalmoscope, speculum, &c., will be found highly useful.

The Physician's Visiting List, Diary, and Book of Engagements for 1856. Philadelphia: Lindsay & Blakiston.

This little memorandum book has now been annually furnished for several years, and has been found very convenient by practitioners of medicine, both in the country and city.

Physiological Chemistry. By Prof. C. G. Lehmann. Translated from the 2d edition, by George E. Day, M.D., F.R.S., &c. Edited by R. E. Rogers, M. D., Prof. of Chemistry in the University of Pennsylvania. With illustrations selected from Funke's Atlas, and an appendix of Plates. In 2 vols. 8vo. Philadelphia: Blanchard & Lea.

Physiological Chemistry is progressing so rapidly that new works upon the subject are being continually needed. The one before us is as full and complete as German labor and American additions could make it—and it is published in the usual excellent style of the enterprising house of Blanchard & Lea. All teachers must possess it, and every intelligent physician ought to do likewise.

Principles of Human Physiology, with their chief applications to Psychology, Pathology, Therapeutics, Hygiene, and Forensic Medicine. By Wm. B. Carpenter, M. D., F. R. S., &c., &c. A new American from the last London edition. With 261 illustrations. Edited, with additions, by Fr. G. Smith, M. D., Professor, &c., &c. Philadelphia: Blanchard & Lea. 1855. 8vo., pp. 900.

To eulogise this great work would be superfluous. We should observe, however, that in this edition the author has remodelled a large portion of the former, and the Editor has added much matter of interest, especially in the form of illustrations. We may confidently recommend it as the most complete work on Human Physiology in our language.

Synopsis of the Course of Lectures on Materia Medica and Pharmacy— delivered in the University of Pennsylvania, by Joseph Carson, M. D. 2d edition, revised. Philadelphia: Blanchard & Lea. 1855. 8vo. pp. 196.

This is one of those works, the value of which we have never been able to appreciate. It is designed for students; but what does it teach them save the author's classification and the *headings* of what they should learn? As a specimen of the information thus conveyed, we reproduce at random *the whole* of the first and the last articles in the book.

"*Tannin.*—The proximate principle of the vegetable astringents. Obtained most conveniently from powdered galls. Mode of obtaining. Form; sensible properties; solubility. Chemical characteristics. Two kinds; one striking a *blue-black* precipitate with the salts of iron; the other a *green-black.* Source of each.

Incompatibles.

The compounds formed by the union with bases called *Tannates.* Character of the precipitate formed by each kind on animal matter. Tests."

"*Kooso.*—The flowers of the *Brayera anthelmintica.* Grown in Abyssinia.

Characters; odor; taste.

Value as an anthelmintic. Mode of administration."

Surely this is an easy way to "make a book."

A Book of Prescriptions: containing 2900 *prescriptions, collected from the practice of the most eminent physicians and surgeons, English and foreign. Comprising also a compendious history of the Materia Medica of all countries, alphabetically arranged; a list of the doses of all officinal or established preparations.* By Henry Beasley. Philadelphia: Lindsay & Blakiston. 1855. 12mo., pp. 369.

This is another of those small books designed to *aid* the junior members of the profession, or perhaps to be bought by the verdant, who may think themselves fully equipped for practice with 2900 prescriptions in their saddle-bags. The compiler, as if conscious that he was laboring for "green Doctors," is careful to impart some of the rudiments of the supposed unknown tongue in which the said prescriptions are mystified. We accordingly find among the first pages of the book, not only an explanation of the "signs and abbreviations," but also "a list of the Latin words and phrases, more or less frequently met with in prescriptions." The list begins thus:

"*Abdomen*, the belly; *abdominis*, of the belly; *abdomini*, to the belly! *Absente febre*, is the absence of fever."

We are opposed to humbuggery any where, but especially in scientific matters; and we really think that it would be much better for all practitioners to write their prescriptions in plain vernacular, than to adhere to a custom which no doubt originated at a time when it was deemed a virtue to keep the masses in ignorance. Is it not preposterous and humiliating to see a collection of prescriptions, upon the proper use of which the life of the patient may depend, made up and accompanied with directions, all confessedly unintelligible (to many) without reference to the appended glossary.

A Dictionary of terms used in Medicine and the Collateral Sciences. By R. D. Hoblyn, A. M., Oxon. A new American from the last London edition. Revised, with numerous additions. By Isaac Hays, M. D., &c. Philadelphia: Blanchard & Lea. 1855. 12mo., pp. 509.

Hoblyn's Dictionary has long been a favorite with us. It is the best book of definitions we have, and ought always to be upon the student's table.

Pronouncing Medical Lexicon: containing the correct pronunciation and definition of most of the terms used by speakers and writers on Medicine and the collateral sciences. With addenda. By C. H. Cleaveland, M. D., &c., &c. Cincinnati: Langly Brothers. 1855.

This is a good little book of the kind; but not to be compared to that of Hoblyn, which is small enough to be useful.

Scenes in the Practice of a New York Surgeon. By Edward H. Dixon, M. D., Editor of the Scalpel. With eight illustrations by Darley. New York: De Witt & Davenport. 1855. 12mo., pp. 407. (For sale by M. G. McKinne.)

The author of this work is extensively known as a vigorous and racy writer, and this production fully sustains his reputation as such. The disposition too often evinced in the pages of the "Scalpel" to acquire notoriety by the abuse of respectable members of the medical profession, and even of institutions deemed Holy, has very generally alienated the author from those who might have otherwise applauded some of his positions and strictures. Yet, in the work before us, we have noticed nothing specially objectionable, and the book will doubtless prove interesting to most readers.

Magendie, the celebrated physiologist, died in Paris early in October, at quite an advanced age. His disease was an affection of the heart.

Lawrenceville, Ga., Sept. 19th, 1855.

Prof. Dugas: *Dear Sir*—In looking over some old numbers of *Wood's Quarterly Retrospect*, I find an exceedingly interesting account of an operation performed by the celebrated Dieffenbach. The case is such a monument of his skill and perseverance, and the description of it so graphic, that I cannot resist the desire to send it to you for publication in your Journal. For in doing this, I feel that I am not only paying a merited tribute to one of the brightest ornaments of our profession, (now alas! no more) but that I am also engaged in the noble enterprise of heralding the triumphs of modern Surgery, and of confirming its claims to the confidence and gratitude of mankind. While on this subject, I would remark, that we, in this day of quackery and humbuggery, have much reason to felicitate ourselves on the fact that surgical *skill* cannot be obtained by a *patent* and that the

ignorant mountebanks who infest our country will not be likely to emulate the deeds of Dieffenbach and others, in Surgery.

Yours, truly, JOHN S. WILSON.

Complicated Plastic and other Operations, successful in removing an extraordinary Case of Deformity of the Face from Scrofula.—By Professor DIEFFENBACH. Dieffenbach related as follows, one of the most dreadful deformities that can be imagined:—

"It was late one evening that three strangers requested to see me, a man and two women; and one of whom, who was closely veiled, wished to speak to me alone. Her companions having retired, she seemed to cast her eyes around the room, to ascertain that no one else was present, and then, with some hesitation, and without uttering a word, she slowly raised the thick black veil, by which her head and face had been concealed and a great portion of her person enveloped. I had seen much in my life that was shocking, and, as I thought, the most hideous deformities of face and figure were so familiar to me that I could behold them comparatively unmoved; but here I started back, shuddering and horror-struck. A death's head, a skull with glistening eyes, red and everted eye-lids, and a skeleton face, stood involuntarily grinning before me. The cheeks and lips were absent, and in their place a thin red skin covered scantily the almost denuded bones. In place of a nose was a large triangular hole, through which, when she gave utterance to sound (speak she could not,) the tongue protruded, for the palate bones were gone, and the œsophagus was freely exposed to view. At the upper portion of this dreadful orifice, through which three fingers could be introduced, a red and bony process protruded extending upwards between the remains of the eye-brows, while its lower margin was the remains of the upper jaw, now reduced to a small and toothless bony rim; where cheeks had been, red and indurated cicatrices crossed each other in all directions, and, as I have said, ectropium existed to a great degree. This is no exaggerated portrait of a young girl of eighteen years of age, member of a noble and powerful family, but nevertheless the victim of scrofula.

"I stood late at night and alone with this dreadful apparition—a foul thing, which forcibly reminded me of the prophet Khorassan, when he raised his veil. Instead of a human voice, hissing and unintelligible sounds proceeded from the cavity in the face; and I drew back with horror as she advanced to place her finger on my nose. Well did I understand the appeal, and deeply did I regret my inability to ameliorate the condition of this unfortunate lady. When I had made her understand by signs that I could do nothing for her, an exciting scene followed. She cast herself before me in a state of the deepest mental agony, imploring by signs my assistance; and when I summoned her companions (one her brother and the other her governess) to assist in calming her, she hastily resumed her veil; for, for years, she had not allowed her family to behold her deformity. The governess spoke French, and I told her I could do nothing but recommend a mask; and then I hastily withdrew from this strange midnight scene, the recollection of which will never be effaced from my mind.

"The next day I left Berlin for Vienna; and scarcely had I arrived there than the invalid lady again presented herself before me. She had heard of my departure, and immediately followed me. Here I called in the assistance of the great dentist, Carobelli, with whose aid I succeeded

in procuring a set of teeth and a false palate, which facilitated eating, and made her speech more intelligible.

"The more I considered this case, the more I felt convinced that I could do nothing further, and that it was utterly impossible to obtain a nose or even a fleshy covering for the hole in the face. The bones of the forehead were nearly naked, and the thin, spare, and cicatrized skin of the temples, was not sufficient for the purpose. A casual examination of the arm, however, showed much loose and thin skin, and as I raised a fold of it between my fingers, and pressed it into the form of a nose, the idea struck me that I might transplant a portion of it to a spot near the inner edge of the right eye-brow, where the skin was not so much destroyed, and afterwards remove it by degrees, in the same manner as heavy monuments are sometimes slowly transplanted from one place to another."

[Dieffenbach acted upon this idea, and proceeded to relate the steps of the operation, or rather series of operations, which extended over a period of eighteen months, exhibiting as much the skill and perseverance of the operator as the patience and confidence of the unhappy lady. A nose was formed from the skin of the upper part of the left arm, and that in a very novel manner. A triangular piece was marked out, about a third larger than the supposed size of the required nose; an incision was then made along its sides, and upon the outer and inner thirds of its base. By subcutaneous dissection, this triangular portion of the skin was separated from the muscle, but still left attached to the arm by its somewhat broad apex and the middle third of its base. The edges of the wound on the arm were then brought together as much as possible by straps; and the sides of the triangular portion of the skin turned inwards and properly secured. It was three months before the parts had healed; and then Dieffenbach had obtained what might be called a triangular loop of flesh, attached by its base and apex to the arm. This was to form the new nose. The parts being healed, Dieffenbach proceeded to fix the prepared nose to the inner edge of the right eye-brow, which, as we have said, was thick and puffy. This he did in the old Taliacotian method, by detaching the apex of the new nose, or triangular portion of the thickened skin, from the arm, uniting it in situ with the brow, and fixing it by sutures and appropriate bandages.

He had many doubts as to the success of the operation; and the great advantage of this mode of operating is, that if we at first fail in attaching a new nose to the forehead, we may commence *de novo*—at any rate we may heal the wound we have made on the brow, and again attempt to attach to it the stump which still remains upon the arm. Again, it is preferable to the common Taliacotian operation, where, even if successful, the patient's face is deluged with the results of suppuration, as is not the case in that performed by Dieffenbach. Contrary to expectation, the stump did unite to the brow; in a few days all ligatures were removed; the patient bore the distressing position of her arm with the greatest fortitude, and could with difficulty be persuaded at the end of a fortnight to allow the base of the triangle to be cut away and the arm relaxed from the face. The case was perfectly successful; and suffice it to say, that by transplantations, frequent and small incisions, and parings, and gratings, and by the introduction of tubes and needles, and by compresses, a respectable nose was at length formed; by appropriate operations the ectropium of both eyes was relieved; the many and hard cicatrices were removed from the face; and at the end of eighteen months, the patient was presented to the Clinique a very different being to what she was when last there; and she

quitted Berlin, with the consciousness that, by her steadfast and enduring perseverance, she had compelled the professor to an operation he had deemed impossible, and even by the success of which he had been amply rewarded.]—*Ranking's Abstract, condensed from the Med. Times.*

March 6, 1847.

Epilepsy.—Trousseau considers that he has permanently cured twenty epileptics in one hundred and fifty cases, treated with belladonna. His mode of giving the remedy, as described in his clinical lectures at Hotel Dieu, is to make the pills of the extract and the powdered root of belladonna, aa 1-7th grain. A pill to be taken every night for the first month; two pills during the second month; three on the third month, and four during the fourth month. If at the end af twelve months the register shews a diminution of the seizure, the remedy may be persisted in, with great hopes of a perfect recovery in from two to four years. The dose should not be increased, after the physiological action of the remedy is manifested.—[*Ib.*

Typhoid Fever.—Dr. Shute, of the Torbay Infirmary, treated during the year 1854, forty-eight cases of Typhoid fever in that institution, losing but one patient. His treatment, as recorded in the Medical Times and Gazette, was to use brandy and quinine freely, and sustain and nourish the patient. The doctrine of feeding fevers is becoming very generally approved of, and the success in the results of the treatment are encouraging.—[*Ib.*

A Remarkable Case of Super-Fœtation.—The following case was related to us by Dr. Bigelow, of this city, who is cognizant of the facts: Mrs. C., æt. 18, of healthy constitution, accustomed to menstruate every two weeks, was married Oct. 9, 1854, after which she had three menstrual periods in regular succession. On the 10th day of July following (nine months and one day after marriage) she gave birth to a full-sized male child. She did not, however, regain her former size, the lochia continued for a week; the milk was watery and scantily secreted, so that the child had to be fed, and in about a week she was up. She continued well until the 22d of Sept., (72 days after the birth of her first child,) when she was taken sick, as she supposed, with cholera morbus, but after a short labor she gave birth to a female child, of about the same size as the former. The lochia continued longer this time, and the milk was secreted abundantly. Both children are thriving, and the mother is in perfect health.—[*N. Y. Jour. of Med.*

Sweetened Water as a cure for Opacity of the Cornea, produced by Lime.—A man was brought lately to the Hospital after having received slaked lime in his eye, and Dr. Gosselin saw him ten minutes after the accident. The cornea, already had a remarkable opacity. No suppuration occurred, and the transparency of this membrane was restored in a few days under the influence of a mode of treatment discovered by M. Gosselin in the following experiments. He threw slaked lime on the eyes of animals, and he saw that, contrary to what is admitted to take place in such a case, there was no inflammation produced. A sudden opacity appeared, resulting merely from the introduction of the lime between the elements composing the tissue of the cornea. M. Gosselin found that a solution of many acids was able to restore transparency; but that frequently a suppurative inflammation was the consequence of the irritation produced by the acid. *Eau*

sucrée (sugar and water) gives much more satisfactory results: it destroys the opacity in a very short time, and never causes any inflammation. The man, above spoken of, had his eyes washed with *eau sucrée*, and in three days the opacity of the cornea had entirely disappeared. I have seen M. Gosselin performing with success, in presence of the society, the experiment of restoring to transparency the opaque cornea of a dog's eye.—*Med. Times and Gazette.*

Tinct. Ferri Muriatis in Uterine Hemorrhage.—Dr. Schreier, of Hamburg, states that, during the last thirteen years, he has found this a most valuable styptic in severe uterine hemorrhage prior to delivery. He injects 50 or more drops, diluted in 3 or 4 ozs. of water. Of late he has also applied it in hemorrhage dependent upon placenta prævia, when the os is insufficiently opened to admit of labour being terminated. A sponge tent, cut to the form of the os, is steeped in the tincture, and passed as high up as possible. It not only arrests the hemorrhage, but hastens the dilatation. The tincture has also been found valuable in hemorrhage from cancer uteri. —*Monats. für Geb.*, and *Ibid.*

Oxalate of Potassa in Puerperal Diseases.—Dr. Ritter von Brenner strongly recommends this substance in inflammation of the peritoneum, uterus, or ovary, and especially in the metro-peritonitis of puerperal women. The formula is,

℞. Aq. dest. ℥vi; oxal. pot. gr. vi; sacch. ʒij. M. A spoonful every hour.—*Buchner's Repert.*, and *Ibid.*

Muriate of Morphia and Coffee in Neuralgia.—M. Boileau reports that he has derived great relief in the paroxysms of neuralgia from the administration of muriate of morphia in a very hot infusion of highly-roasted coffee. The dose is one centigramme ($\frac{1}{7}$ grain) for an adult, and less in other ages or in peculiar temperaments. This may be repeated when a violent paroxysm recurs, and if necessary it may be increased by fractions; but M. Boileau has never gone beyond two centigrammes.—*Gaz. des Hôp.* and *Ibid.*

Opiate Inhalations in Neuralgic Pains.—Take two grains each of powdered opium and sugar, also gum benzoin if desired, which sprinkle upon a hot shovel held under the patient's nose. It will afford prompt relief in coryza, with pain in the frontal sinus, as also in the various neuralgic pains of the frontal, temporal and zygomatic regions, whether of an idiopathic or symptomatic nature.—[*St. Louis Med. Journ.*

Statistics of Mortality in Norfolk and Portsmouth, during the prevailing Epidemic.—It has been estimated that the population of Norfolk, which is usually about 14,000, has been reduced by flight to not more than 8,000 persons, whilst in Portsmouth, with an average of 8,000 inhabitants, it is supposed that probably 4,000 have remained. The number of deaths in Norfolk to the 20th of September have been not far from 1,400, whilst in Portsmouth it is estimated that 700 have died from the disease. Thus in 12,000 persons, we find a loss of 2,100 from the ravages of this awful scourge. Yet, even with this fearful exhibit, the disease is not satisfied, for daily victims are being added to the mournful list.

For the sake of comparison, let us turn to the admirable tables of Dr. La Roche, in his late treatise on Yellow fever, and we see that even this malignant visitation has been exceeded in the ratio of deaths to population. Thus,

In Palma, 1821—The remaining population being just that we have allowed to Norfolk and Portsmouth, i. e., 12,000, the number of deaths were 5,341.

In Gibraltar, 1804—With a population of only 10,000, the mortality was more than *one-half*, the number of deaths being 5,946, whilst in the epidemic of 1821, at Barcelona, of 830 patients entered at the General hospital, *all died* but 81!—[*Virginia Med. and Surg. Journal.*

THE MEMORY OF

Sylvester,	Trugien,	Gooch,	Craycroft,
Constable,	Parker,	Howle,	Mierson,
Halson,	Lovett,	Gelbardt,	Handy,
Sylvester, Jr.,	Walters,	Blow,	Cole,
Higgins,	Thompson,	Jackson,	Morse,
Briggs,	Fliess,	De Berane,	Rizer,
Upshur,	Booth,	Obermuller,	Smith,
Tunstall,	Howe,	De Capry,	Marshall,
Selden,	Bache,	Hunter,	Craven,
Burns,	Dillard,	Schell,	Berry.

At the close of a long and bloody battle, it is the custom to present a list of the killed and wounded; that sad record of the lamented dead, who have gone down to the grave midst the smoke of the conflict; that glorious record of the heroic dead, whose gallant deeds are painted on the pages of history, whose names are cherished in all hearts.

We too, have now to tell of like men with these; of some who have fallen at the post of duty; of others who have died whilst serving as volunteers in a deadly campaign. With no hope of victory, with no pomp and circumstance of war to animate the heart, our brethren in Norfolk and Portsmouth have calmly, firmly discharged their duty, and have met their fate. The slaughter is now over, and we record a mortality unprecedented in history.

Forty physicians have fallen in the hopeless contest. Exhausted with fatigue and watchings; dispirited by their want of success; pressed down with the weight of responsibility resting on them, they have sunk, easy victims to an enemy whose ravages they faithfully labored to resist. Many of these men were residents of the infected cities, and though all was consternation around them, they flinched not at that trying hour; whilst others from all parts of our country, ardently rushed to the scene of danger, and sacrificed their lives in the vain attempt to check the fearful pestilence.

No pompous funeral accompanied our brethren to their silent grave; no music, sad and mournful, rings upon the ear. They lie quietly now, but they have not died in vain. Faithfully have they fulfilled the sacred duties of their calling, and their memories remain an imperishable legacy to the profession they have ennobled and adorned.—[*Virginia Med and Surg. Journal.*

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